Choose Safe Places for Early Care and Education (CSPECE)

Phase Two

Florida Department of Health
Division of Disease Control and Health Protection
Bureau of Environmental Health
Public Health Toxicology

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Choose Safe Places for Early Care and Education
Planning. Guidance. Protection.

ATSDR Agency for Toxic Substances and Disease Registry

Florida HEALTH

"The early years of a child's life matter because it lays the foundation for lifelong success!"

-Unknown

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Abbreviations

APPLETREE	ATSDR Partnership to Promote Local Efforts to Reduce Environmental Exposure
ATSDR	Agency for Toxic Substances and Disease Registry
CDC	Center for Disease Control and Protection
CLM	Contaminant Locator Map
CSCPECE	Choose Safe Places for Early Care and Education
ECE	Early Care and Education
E.G.	For Example
EPA	United States Environmental Protection Agency
EPMP	Evaluation and Performance Measurement Plan
FDCF	Florida Department for Children and Families
FDEP	Florida Department of Environmental Protection
FDOH	Florida Department of Health
FWMD	Florida Water Management Districts
GIS	Geographic Information System
NCCCQI	National Center on Child Care Quality Improvement
NCECQA	National Center on Early Childhood Quality Assurance
NPL	National Priorities List
NWFWMD	Northwest Florida Water Management District
US EPA	United States Environmental Protection Agency

Executive Summary

Children are the most sensitive populations when being exposed to environmental hazards such as toxic substances. They are more vulnerable and sensitive towards toxic materials due to their small size and behavior that places them in closer contact with contamination and make them more susceptible to exposure. Some chemicals are more poorly metabolized in developing children than in fully developed adults, and thus may accumulate to higher degree in children. Some of these chemicals such as lead can be harmful for the development of children (Meyer et al., 2003).

Children (below the age of 18) spend most of their time in a care setting outside their homes (Axelrad et al., 2013). Places, where young children may be cared for outside their homes are summed in the "Early Care and Education" (ECE) term. In the United States alone, more than eight million children less than five years of age are cared for in a licensed child care facility (NCCCQI, 2015).

Limited data are available to determine the number of ECE facilities and children at risk to harmful exposures. Therefore, current estimates of possible risk for children in ECE programs are based on extrapolated data. Extrapolation methods have the advantage of requiring only relatively small observed datasets. An extrapolation may, for example, take data observed for one state and apply it to all other states, where data have not been observed. Thus, extrapolation methods, as they use less data, are associated with higher uncertainty.

The Agency for Toxic Substances and Disease Registry (ATSDR) created the Choose Safe Places for Early Care and Education (CSPECE) program to help protect children from health risks while at ECE facilities. The program is increasing awareness of chemical and radiological hazards, how to reduce exposure to existing hazards and the considerations necessary to avoid placing new facilities at hazardous locations. ATSDR created the Choose Safe Places for Early Care and Education (CSPECE) Guidance Manual that offers tools and resources to build programs to protect children in their communities (ATSDR, 2017). The Florida Department of Health (FDOH) has joined forces with the ATSDR "Partnership to Promote Local Efforts to Reduce Environmental Exposure (APPLETREE) Program" to execute its mission to protect, promote & improve the health of all people in Florida through integrated state, county, & community efforts. Due to previous experiences of FDOH with environmental hazards in ECE facilities, the FDOH efforts aims to achieve CSPECE program goals to protect the health of children, especially at ECE facilities. The goals include defining the selection process for ECE program locations, developing methods to help ensure ECE programs are placed on safe sites, and implementing a pilot Choose Safe Places Program.

This report presents Phase Two of four phases of CSPECE implementation in Florida: Program Planning.

1 Introduction

The Florida Department of Health (FDOH) has had previous experiences with environmental hazards in Early Care and Education (ECE) facilities. On November 12, 2015, the Florida Poison Information Center in Tampa notified FDOH in Hillsborough County of a three-year-old boy, who had a urine mercury level of 79 µg/L (normal <10 µg/L) (Tewell, Spoto, Wiese, Aleguas, & Peredy, 2017). In response, FDOH developed a factsheet warning about the dangers of liquid mercury to young children. The Florida Department of Children and Families (FDCF) distributed this warning to 9,200 child care operators.

Children at ECE facilities that are operating on land or in buildings that could be or were impacted by hazardous chemicals could be at risk. Even if an ECE program meets current state licensing regulations, the children and staff could be exposed to environmental contamination due to the facility location and location history. Children and staff at such facilities could be at health risk and it is crucial to identify chemically-impacted child care facilities as early as possible.

To execute its mission to protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts, FDOH joined a cooperative agreement with the APPLETREE Program of the Agency for Toxic Substances and Disease Registry (ATSDR). The APPLETREE Program is the Partnership to Promote Local Efforts to Reduce Environmental Exposure. APPLETREE funds 25 state health departments to increase their capacity to advance ATSDR's goal of keeping communities safe from harmful chemical exposures and related diseases. Because ATSDR is committed to promoting the healthy development of children, ATSDR expanded the scope of this cooperative agreement to include Choose Safe Places for Early Care and Education (CSPECE). The CSPECE is a program that, once implemented, protects the health of children in ECE facilities by providing tools and resources to help public health professionals conduct early evaluations of facilities and their surroundings. These evaluations are tailored to reduce children's risk of being exposed to dangerous chemicals while at the facilities. The CSPECE program emphasizes on identification of environmental hazards and environmental auditing as described by the National Center on Early Childhood Quality Assurance (NCECQA). According to NCECQA, an environmental audit should be conducted before construction of a new building; renovation or occupation of an older building; or after a natural disaster, to properly evaluate and, where necessary, remediate ("clean up") or avoid sites where children's health could be compromised (EPA, 2011; Somers, Harvey, & Rusnak, 2011).

During the past year and as a continuous effort, FDOH is working to achieve the CSPECE program goals in Florida. The overall goal is to develop and implement methods that help ensure that ECE programs are placed on safe sites. The ATSDR provides technical support and guidance to APPLETREE states to help start individual state CSPECE programs. CSPECE in Florida will be implemented in four phases (Figure 1). Each phase will help to form partnerships, identify ways to strengthen licensing policies and build on existing resources. The program will include education and training of FDOH staff, ECE staff, staff from other agencies, as well as the community.

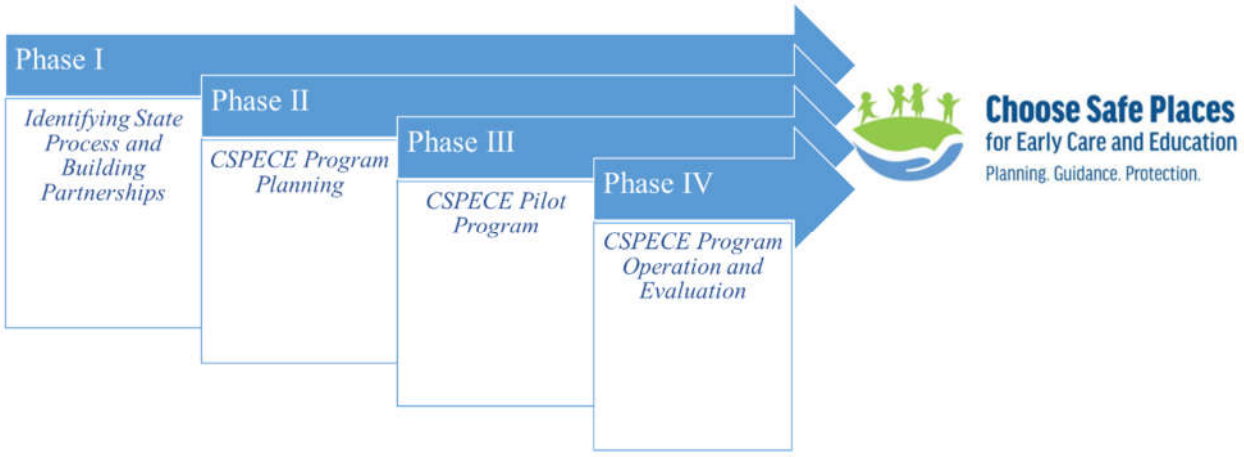

Figure 1: Overview of the Implementation of Choose Safe Places for Early Care and Education (CSPECE) in Florida.

Phase One (Identifying State Process and Building Partnerships) was completed between April 1, 2017 and March 31, 2018. Phase One identifies state processes and builds partnerships. A desktop analysis was conducted to provide information for the following questions:

- How do early care and education licensing programs work within the State of Florida?
- Who are the stakeholders of ECE licensing programs and how are they/how could they be involved in ECE licensing?
- How have you built/will you build non-governmental partnerships with ECE decision makers?
- What data sources could be used to foster a CSPECE program?

The Phase One report is available on the FDOH website: http://www.floridahealth.gov/environmental-health/hazardous-waste-sites/_documents/choose-safe-places-phase1-final.pdf.

The current report concludes Phase Two of the Florida CSPECE.

2 Phase Two: Program Planning

2.1 Planning and Development Considerations: Understanding the Needs for Successful CSPECE Program Implementation

The Florida Department of Health identified necessary requirements for a successful planning and implementation of a CSPECE program that will protect children, be proactive, and raise awareness (Figure 2).

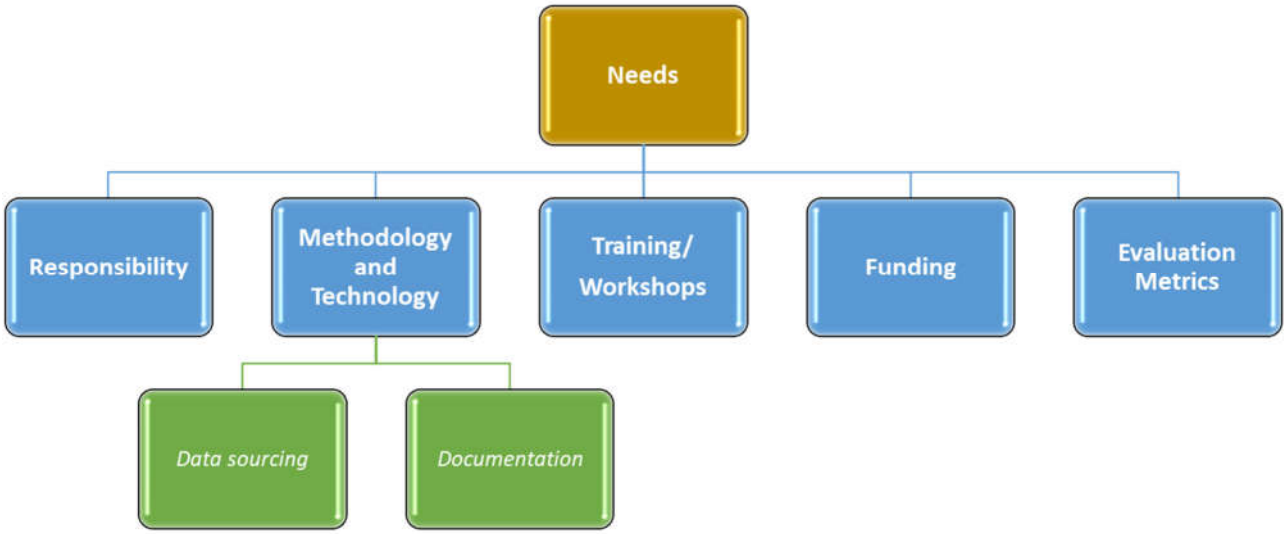

Figure 2: Program elements that summarize the required needs for a successful CSPECE protocol implementation.

The identified requirements/needs were based on the following discussion:

Discussion 1: Discussion occurred pertaining to the type of partners needed and with whom to place the responsibility of planning and leadership before and after program implementation. A leadership role includes decision making as well as problem solving. The foundation for effective leadership is shown in Figure 3 [Adapted from (Franklin Covey, 2018)].

> **Decision 1a: Planning Group**. FDOH has reached out to potential governmental and non-governmental partners to create a Choose Safe Places Planning Group (Appendix 1, Attachment A). A Florida Department of Agriculture and Consumer Services (FDACS) human health risk assessor has tentatively accepted an advisory role on the Florida CSPECE planning group (pending approval). FDOH is also working on establishing a connection with the Good Neighbor Practices (GNP) Program at the University of Florida (http://schoolipm.ifas.ufl.edu/Florida/goodneighbors.htm). The GNP works to open communication between growers and schools to avoid pesticide exposure at schools and will be a relevant resource for the Florida CSPECE.
>
> The 'Florida CSPECE Planning Group' meets once a month in person or via web conference to ensure that the CSPECE program considers all necessary steps needed to protect children and to ensure that the program can be implemented state-wide. Each

meeting provides an overview of program status as well as progress made since last meeting. Partners and coalitions will continue to receive regular emails with information material and will be contacted directly regarding urgent questions and/or concerns.

Decision 1.b: **Leadership**. FDOH is the lead agency to plan and implement the CSPECE program. FDOH will continue to take leadership and look for possibilities to improve as the program moves forward. FDOH will communicate regularly with the partner agencies, other partner groups and involved parties to inform about progress and updates. Partners are currently assigned as advisors. Additional leadership functions are defined in Figure 3.

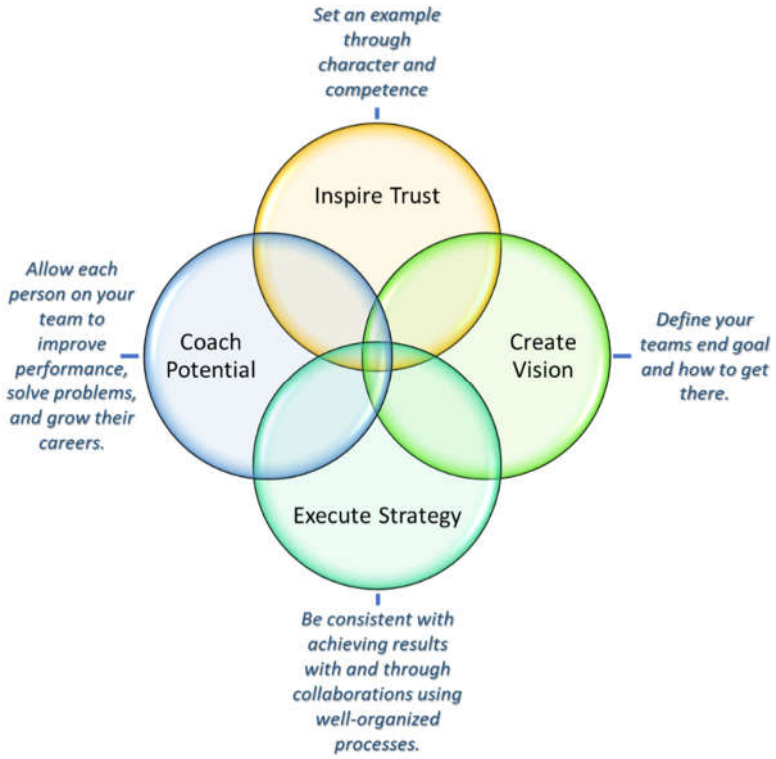

Figure 3: Foundation of effective leadership [Adapted from (Franklin Covey, 2018)].

Discussion 2: A successful CSPECE program will require the most suitable methodology and technology. The ultimate goal is a reliable tool to identify possible hazards near existing and/or future ECE sites, as well as, a reliable tool to assess risk at sites found to be of concern.

Decision 2.a: General methodology considerations. For each methodology selected for the CSPECE program, FDOH considered the entire lifetime of the tool through five steps: preparation, design, implementation, evaluation, and maintenance (Figure 4). Taking each of these steps into account, FDOH considered the utilization, applicability, cost, and overall feasibility of the methodology to be used.

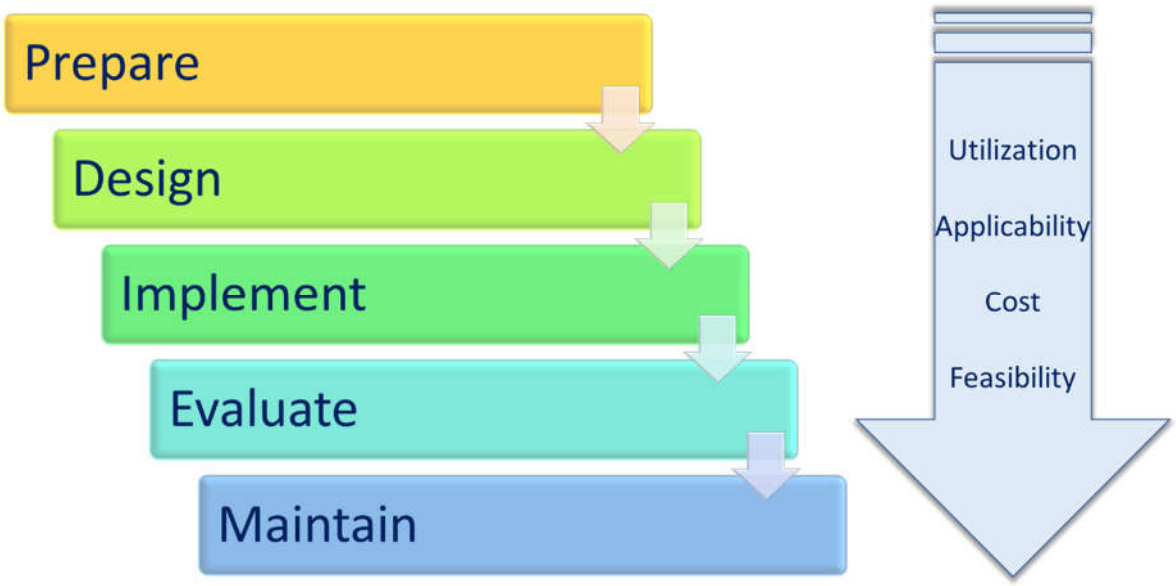

Figure 4: Methodology selection process.

Existing data sources and tools utilized for the CSPECE program include:

- ✓ Environmental data
  - Geographic Information System (GIS)
  - Department of Environmental Protection (FDEP) data and maps
  - FDEP Information Portal and Oculus
    All FDEP databases are connected and provide access to reports needed to assess and identify the contaminated media, the contaminant(s) of concern, the groundwater flow, and other useful data.
  - Water Management District database
  - Florida Water Management Inventory (FLWMI) database (FDOH)
  - FDOH Well Surveillance Program
  - Florida Department of Agriculture and Consumer Services (FDACS)

- ✓ ECE data
  - Department of Children and Family (FDCF) data and GIS maps
  - Inspection Forms used for permitting (FDCF)

- ✓ Risk Assessment Tool
  - Public Health Assessment Site Tool (PHAST) (ATSDR resource)
    The tool will be used to determine risk factors at ECE facilities of concern.

As part of the ***Decision 2.a.*** process, a need for additional tools was identified. Therefore, FDOH has and/or is currently developing following:

- ✓ An interactive GIS map tool
- ✓ CSPECE protocol flow chart and checklist
- ✓ Environmental Health Survey Forms used for site visits (FDOH).

Existing data sources and tools considered to be utilized for the CSPECE program

The interactive GIS map tool has currently no data available to locate farms that may apply pesticides to land near ECE facilities. FDOH consulted with the Florida Department of Agriculture and Consumer Services (FDACS) to learn about the availability of farm mapping tools and other data resources, such as crop and pesticide usage reports, that could be helpful track farms and pesticide usage in relation to ECE facilities. FDACS produced a technical review of current data availability and scientific knowledge of pesticide drift to nearby sensitive populations (Appendix 3).

It was concluded that the requested agricultural data and tools are limited in Florida, and site visits will be important to identify farms in proximity to the assessed facilities. Reports of adverse health effects of pesticide exposure in ECE facilities are few, and most incidents are caused by on-location pesticide applications rather than by drift from farm land. As no data regarding agricultural farmland are available to be used in a GIS format, FDOH will have to ensure to distribute educational materials regarding information on appropriate use of pesticides at ECE facilities.

Decision 2.b: An ***interactive GIS map tool*** is currently being developed to identify child care facilities that are located near (within a 600-foot radius) hazardous sites, dry cleaners, and/or other possible hazards [hazard identification]. The GIS tool will include all data collected from the partners.

Decision 2.c: Protocol, flowchart, checklist, environmental health survey. A detailed protocol has been developed and describes each step of the proposed CSPECE procedure to assess child care facilities in Florida, including a description on how to use the collected data to perform a preliminary site assessment. The protocol has been evaluated by the partners and all recommendations were considered. The protocol utilizes three ***flowcharts*** (Appendix 1, Attachment B), a ***checklist*** (Appendix 1, Attachment C) and ***hazardous waste site supplementary checklist*** (Appendix 1, Attachment C), as well as an ***environmental health survey form*** (Appendix 1, Attachment D).

The checklist and survey forms are fillable. The checklist will be used as an organizational tracking tool helping staff to complete all necessary steps in accordance with the proposed timeline. The survey form will be used during in-person site visits to help staff to consider and identify any possible hazards present at a site. Following the protocol and checklist, the assessor and other involved parties will utilize the tools mentioned in ***Decision 2.a.***, ***2.b., and 2.c***.

The proposed Florida CSPECE protocol is attached in Appendix 1.

Decision 2.d: Descriptive data/desktop analysis. FDOH will conduct site history assessments (desktop analysis) and site visits, if feasible, to collect other descriptive data that could help identify any possible concerns. The desktop analysis is a tool to study and understand the current or historical conditions of the child care site and/or nearby hazardous sites. Relevant descriptive data include, but are not limited to, waste left or stored on the property grounds, nearby businesses that may use hazardous chemicals, radon levels, lead-based paint usage, and asbestos. It is also important to know the water source used at the facility and if the ground cover is protective of potential soil contamination. Both the FDOH Well Surveillance Program and the Florida Water Management Inventory have online web mapping applications that can be used to identify private wells: (https://gis.flhealth.gov/ehwater/ and https://gis.flhealth.gov/flwmi/).

Decision 2.e: Pilot Study (Phase III FY 2019-2020). As of March 2019, Florida has 9,084 registered child care centers that will undergo a renewal permit application in 2019 (information was compiled from the FDCF database in March 2019). It is proposed that the pilot study will focus on child care centers that submit new applications within Leon County and approximately 3 other counties within the State of Florida, as it will not be feasible to assess all renewal facilities in the pilot study. Furthermore, the pilot study will focus on a broad range of socioeconomic ECE programs to ensure a better basis for improvements when evaluating the Florida CSPECE program.

Decision 2.f: Documentation. After each preliminary assessment, a short overview letter summarizing the findings will be provided to each party and partner. FDOH will compile a detailed report within six weeks of each permit application. FDOH is also considering providing a 'Certificate of Successful Participation' to the ECE facilities. Discussions with ATSDR are currently ongoing to develop a nationwide CSPECE certificate template usable for each participating State.

Decision 2.g: **Data Sharing.** All information compiled for the assessment, including the GIS maps, environmental and site data, filled survey forms and checklists, as well as final reports will be made available to the involved parties and partners on the FDOH SharePoint site:
(https://floridahealth.sharepoint.com/sites/DISEASECONTROL/EH/HRAteam/SitePages/Home.aspx).

The CSP SharePoint folder will include subsections that are sorted by County, facility, and a unique tracking ID.

Decision 2.h: An **MS *ACCESS database*** using the unique tracking ID will be used to track the number of screened sites as well as the number of sites yet to be investigated.

Discussion 3: Training and communication/workshops are essential tools for a program's success. Comprehensive training will ensure enhancement of knowledge, skills and experiences leading to improved performance in the trainees' current roles, and ultimately competence, ability and success (Figure 5). FDOH will be responsible for compiling and conducting training.

Figure 5: Schematic overview of the advantages of frequent training and workshops.

Decision 3a: Training and Communication/Workshops. Training will be made available for:

- ✓ County health department (CHD)
- ✓ Owners and staff of the ECE facilities
- ✓ Other staff and agencies involved in the Florida CSPECE program
- ✓ Parents

FDOH has and will continue to develop training. Training topics include:

- ✓ What is the Florida CSPECE?
- ✓ What are environmental hazards?
- ✓ How to use the Florida CSPECE environmental health survey form?
- ✓ How to use the Florida CSPECE checklist?
- ✓ Understanding the Florida CSPECE protocol.
- ✓ Education regarding exposure to chemicals and associated health effects.
- ✓ Education regarding how to protect yourself and your family from exposure.
- ✓ Education regarding chemicals such as: radon, arsenic, mercury, lead, per- and polyfluoroalkyl substances (PFAS), polycyclic aromatic hydrocarbons (PAHs), and many more.

Training will be provided year around. Some training will be accessible on demand via recordings on the FDOH TRAIN website (https://www.train.org/florida/), the FDOH SharePoint, and/or on the FDOH Hazardous Waste Site Health Risk Assessment website (http://www.floridahealth.gov/environmental-health/hazardous-waste-sites/index.html). In-person training will also be available. Training will be provided based on educational background. Timelines have not been discussed yet.

All assessed facilities will receive educational support within four weeks of the final assessment report. Site-specific training will be tailored, and in-person training and/or availability sessions will be provided. FDOH will produce a factsheet and poster to present at availability sessions. Facility owners, staff and parents will be educated on how to avoid/reduce exposure to possible environmental hazards. Facilities where concerns were identified will receive site-specific education.

Decision 3.b: Outreach. Florida's CSPECE factsheet will be distributed and promoted to day care centers, where it will be made available for staff and parents. The factsheet will also be made available to other FDOH programs, the CHDs, the FDCF via the partner agency websites, and during open houses and availability sessions for the community. Further, a 'How to Choose Safe Places' factsheet will be developed and made publicly available.

Discussion 4: To guarantee a successful and long-term implementation of the CSPECE in Florida, additional funding sources will be required to hire additional staff and/or to support other parties to conduct the CSPECE at the local level (*e.g.*, at the county level).

Decision 4.a: Funding opportunities will be further investigated in Phase III.

Discussion 5: An Evaluation and Performance Measure Plan (EPMP) is needed to demonstrate the effectiveness of the CSPECE and to help assess possibilities to improve program quality, make better decisions, and support new approaches.

Decisions 5.a: The CSPECE EPMP is included in the FDOH APPLETREE program Evaluation and Performance Measurement Plan (EPMP) submitted October 8, 2018 (Appendix 2). The Florida APPLETREE EPMP was submitted to meet the requirements set by the ATSDR, and as a condition of the APPLETREE cooperative agreement with FDOH.

3 How the Florida Choose Safe Places Program Will Operate

To finalize Phase Two, FDOH developed a protocol for the Florida CSPECE program (Appendix 1). The proposed protocol is presented in a schematic matrix (Appendix 1, Attachment B, Flowcharts I, II, and III):

Flowchart I - gives an overview of the Florida CSPECE program and highlights the roles of the main parties, who will be directly involved in the evaluation process.

Flowchart II - is an existing FDCF document that describes the child care licensure procedure in Florida.
Flowchart III - presents a detailed description of the proposed assessment process for ECE facilities. This flowchart protocol will be used for each CSPECE facility evaluation.

Flowcharts I and III use color coding for visual presentation of partners responsibilities.

The proposed Florida CSPECE protocol highlights five active/main partners (Appendix 1, Attachment B, Flowcharts I and III):

- ✓ The Florida Department of Health, Headquarters (FDOH) [green bordered shapes]
- ✓ The FDOH Radon Program (FDOH Radon) [light green circles]
- ✓ The County Health Departments (CHD) [yellow shapes]
- ✓ The Department of Children and Families (FDCF) [pink circles]
- ✓ The Department of Environmental Protection (FDEP) [blue circles]

3.1 Expected Roles and Responsibilities

FDOH will be responsible for overall program management, including facility identification and assessment, reporting, as well as training and education. FDOH will also be responsible for initiating communication with partners when relevant. FDOH will utilize databases of FDCF and FDEP in the ECE facility identification and assessment process.

The role of **FDOH Radon** is to provide help with radon assessments, including guidance on the health assessment and testing of facilities that have not been tested.

FDOH will reach out to the local **CHDs**, when assessed facilities are located outside Leon County. The responsibility of the CHDs will be to conduct site visits and report back to FDOH with the obtained information. The CHDs may also be requested to help organizing an open house for educational sessions at ECE facilities. FDOH will provide training for CHD personnel.

The role of **FDCF** is to facilitate access to the ECE facility permit application database. On request from FDOH, FDCF will help identify, which applications are for new facilities, and which applications are for existing facilities (*i.e.*, renewal applications). FDOH will request any available information for each facility. For existing facilities, FDOH will request available site history information from FDCF. Site history assessment for existing facilities will not be repeated, unless data gaps are found, in which case the assessment will be the responsibility of FDOH. FDCF will also help initiate contact between FDOH and ECE facilities after completion of assessment. It will be the responsibility of FDOH to distribute educational materials and perform educational open houses.

The role of the **FDEP** is to advise and facilitate access to the FDEP online databases, including the Contamination Locator Map (http://prodenv.dep.state.fl.us/DepClnup/welcome.do) and the Information Data Portal (http://prodenv.dep.state.fl.us/DepNexus/public/searchPortal). FDOH will consult with FDEP for facilities, where possible chemical concern (other than radon) is identified.

3.2 Overview of Tasks and Timeline

Every month, FDOH will check the FDCF online database for pending permit applications (Appendix 1, Attachment B, Flowchart I, Step I). FDOH will consult with FDCF after each monthly check to determine which of the requested permits are new and which are renewal permits, *i.e.*, are facilities new or existing. FDCF will follow the FDCF Group Care Licensing Process (Appendix 1, Attachment B, Flowchart II). For renewal permits, FDOH will request available site history information from FDCF. For new facilities, FDOH will conduct site history assessments as discussed in Section 4. Through the monthly communication, FDCF will be informed on the number and identity of sites to undergo assessment by FDOH, who will assign an assessor for each site.

The assessor will first complete a preliminary assessment. The findings will be summarized in a short letter to be shared with the partners. This step is time sensitive, because the FDCF processing time is only approximately two and six weeks for new and renewal permits, respectively. The assessor will thus have two weeks for each new facility (Figure 6), and four weeks for each renewal facility (Figure 7), to complete the preliminary assessment and short letter. To ensure sufficient time for the assessment, the FDOH will request the site visit and associated report completed by the CHD within one week for new and within two weeks for renewal facilities. A total time of six weeks will be allowed for completion of the final report (*i.e.*, four weeks from short letter for new permits, and two weeks from the short letter for renewal permits). Community education will be completed within four weeks of the final report.

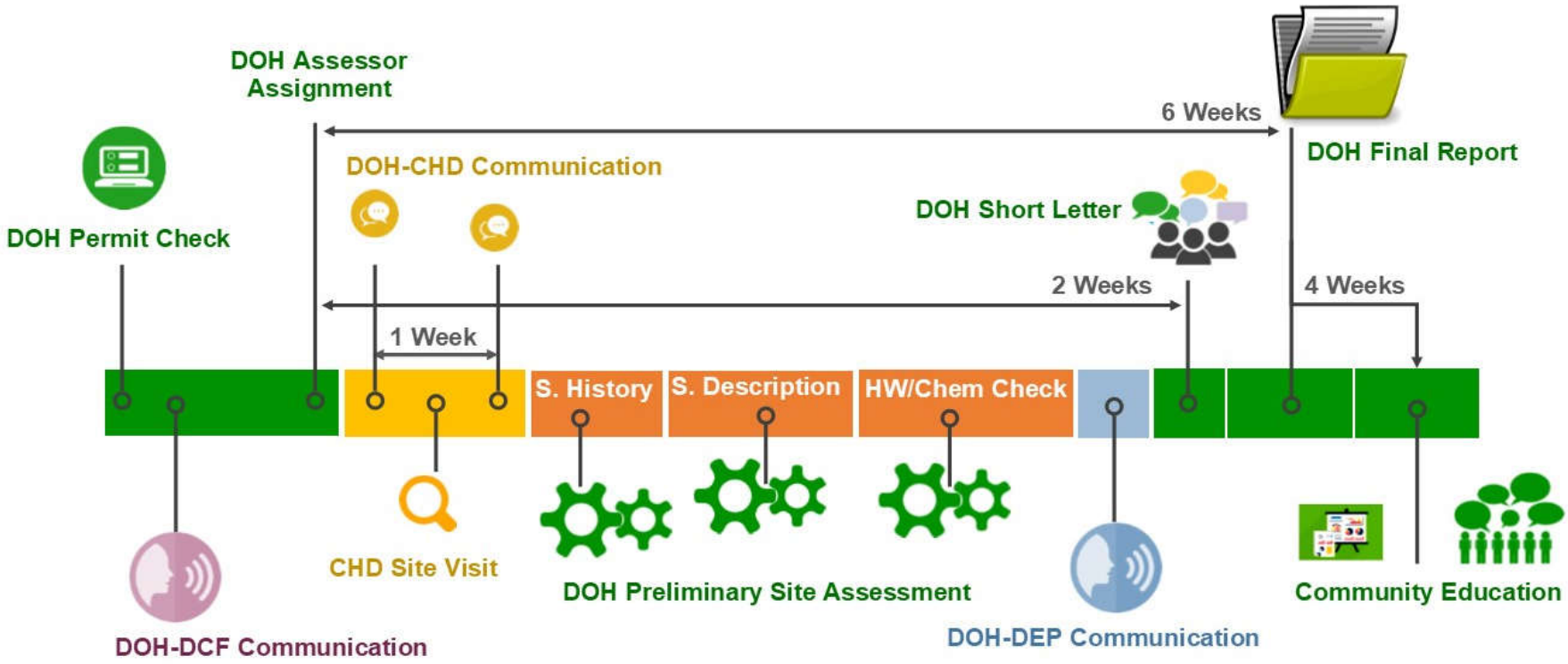

*Figure 6. Timeline for assessment of **new** Early Care and Education (ECE) facilities. CHD = County Health Department, Chem = chemical, DCF = Department of Children and Families, DEP = Department of Environmental Protection, Tallahassee, DOH = Department of Health, Tallahassee, HW = Hazardous Waste Site, S. = Site.*

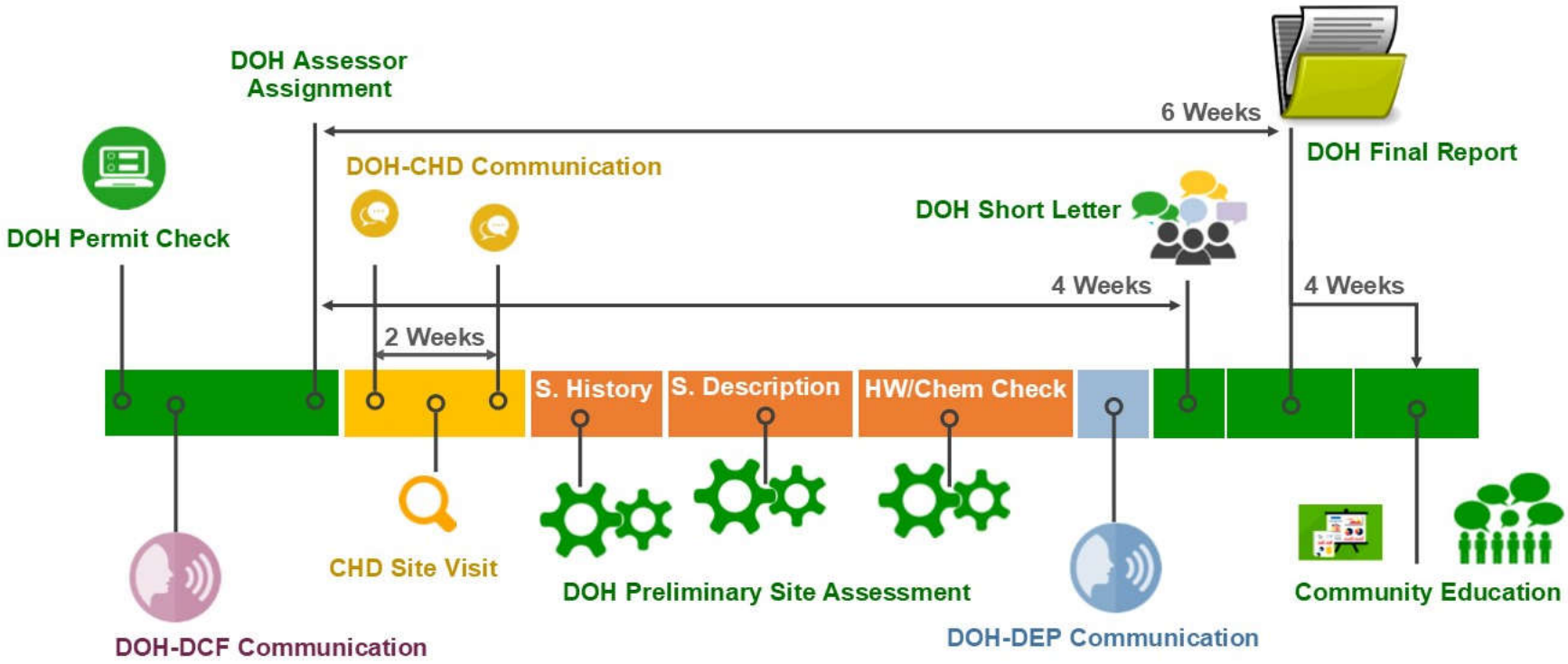

*Figure 7. Timeline for assessment of **existing** Early Care and Education (ECE) facilities (renewal permit). CHD = County Health Department, Chem = chemical, DCF = Department of Children and Families, DEP = Department of Environmental Protection, Tallahassee, DOH = Department of Health, Tallahassee, HW = Hazardous Waste Site, S. = Site.*

4 Program Strengths, Weaknesses, Challenges, Limitations and Gaps in Data Collection

Program strengths: The Florida Choose Safe Places Program has the advantage of a strong planning group with partners from several state agencies. Having a strong advisory group facilitates not only database access and data sharing, but also enables consultation and support from experts across all relevant fields.

In Florida, there are many very versatile online databases available to support most data requirements.

FDOH has the advantage of having a GIS team to help develop the mapping tools needed to locate ECE facilities near hazardous waste sites and other sites of concern.

Program Weaknesses: The sheer number of ECE facilities in Florida (9,084; FDCF database as of March 2019), and the short timeline to process new facilities will present a challenge for the program. Once the program is well established however, the need for assessment will be reduced to new facilities.

The State of Florida has limited data available to address concerns of possible nearby pesticide applications.

Owner privacy policies are expected to provide challenges with respect to site history assessments, including knowledge about the presence of asbestos and lead-based paint.

5 Florida's CSPECE Protocol

As mentioned prior, FDOH has developed a protocol using a flowchart matrix, as well as a comprehensive checklist to ensure consistency during the ECE program evaluation. The Florida CSPECE-Protocol can be found in Appendix 1. The protocol flowchart and checklist are not intended as standalone documents but are to be used in conjunction with the each other. The checklist consists of easy to follow steps and is intended as a tool to help the assessor perform the assessment and to measure performance (time taken, meeting deadlines). Flowcharts I and III are intended as tools for completion of the checklist. Flowchart III describes steps of the site assessment process in more detail (Appendix 1, Attachment B).

6 Florida's CSPECE GIS Tool

6.1 Interactive Maps and Story Maps Development

Florida's CSPECE program is currently developing an interactive mapping tool merging all available data necessary to evaluate the environmental health at and around early childcare and education centers. The Interactive Map will enhance data sharing turnaround times as every collaborating partner will have direct access to the map and therefore be available to update necessary data. Once the development of the Interactive Map has been completed, FDOH will

create Story Maps to provide answers to many questions and make it available to a wide range of audience.

6.1.1 Introducing Florida's CSPECE Interactive Map

The data needed for a successful CSPECE program are available from diverse agencies fulfilling different purposes. Further, these data are separate and independent from each other and use different displaying tools. Therefore, the CSPECE program identified the need of developing an interactive tool merging all available data necessary to evaluate the environmental health at and around early childcare and education centers.

An assigned GIS manager gathered the following data from collaborating partners:

Florida Department of Environmental Protection (FDEP)	Maps and shapefiles of o Brownfields Site and areas o Petroleum Sites o Waste Cleanup Sites o Florida Institution Controls Registry o Open, Inactive, and Closed Sites o Superfund Sites o Dry Cleaners
Florida Department of Children and Families	Listing of all childcare providers
Florida Department of Health	Florida Water Management Inventory map

The next step included an initial, statewide review including a point to point or point to polygon comparison of the day care centers and possible hazardous areas in the state of Florida (Table 1). For the initial review, a 500 feet buffer was chosen due to easier data handling rather than the 600 ft that will be utilized during the pilot study. The initial review showed the number of possible hazardous waste sites (e.g. Brownfield sites, waste cleanup sites) assigned as points or pre-defined polygons located within 500 feet of a day care center and in the direct proximity of the day care center (Table 1) by using a buffer zone around the day care center points. It was discovered, as example, that approximately 1,389 day care center points had brownfield areas points within 500 feet. Out of these, 1,062 daycare center points were right beside or within a brownfield area polygon. It was later discovered, though, that many of these brownfield areas are not contaminated anymore. Similar to this, 99 day care center points were within 500 of Institutional Control Registry polygons.

One of the challenges with the initial analysis of the statewide review was the amount of day care center near Institutional Control Registry polygons (closed cleanup sites with controls) and Brownfield area polygons as not all areas have contamination. When focusing on a smaller, regional area like (Tallahassee, Leon County, Florida), it was determined that eventually a lot less day care centers are at a possible risk than reported (Figure 8).

Further, we did not know which parcels the day care center were actually on (state wide and regional) due to a geocoding error. Depending on the actual location, the day care facility may or may not be within 500 feet of a possible hazardous site. Therefore, the number of concerned day care centers could either be over – or underestimated.

Table 1: GIS initial review overview of point to point and/or point to polygon comparison of day care center location to locations of possible hazardous sites within 1,000 feet, 500 feet, and 10 feet.

Interest	*# Childcare @ 1,000'*	# Childcare @ 500'	# Childcare intersect if poly, @ 10' if point
Brownfield sites (poly)	*134*	51	1
Brownfield areas (poly)	*1,637*	1,389	1,062
Institutional Control Registry (poly)*	*284*	99	3
INACTIVE waste cleanup	*38*	5	0
CLOSED waste cleanup	*683*	218	2
OPEN waste cleanup	*122*	33	0
Superfund (open, closed)	*6*	1	0
Dry cleaning (open, closed, on hold)	*619*	215	0
State funded cleanup (open, closed, on hold)	*14*	5	0
DEP Cleanup sites category:			
Brownfield	*65*	15	0
Other Clean Up	*772*	255	0
Petroleum	*1,767*	612	0
Superfund	*6*	1	0

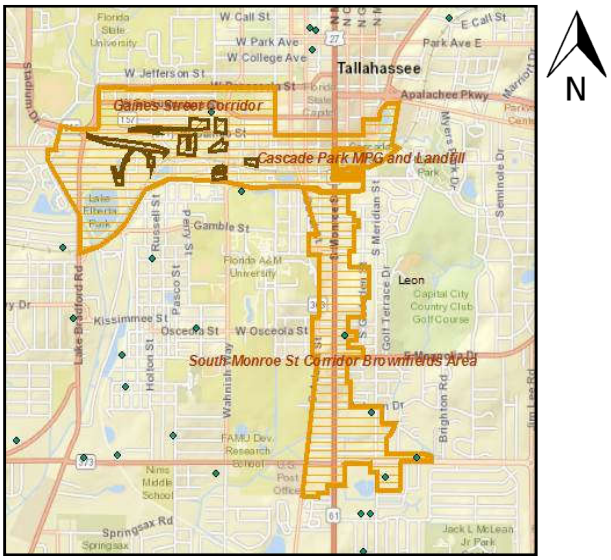

Figure 8: Day care centers (green circle) in the proximity of a Brownfield area (orange, lined area) in Tallahassee, Lean County, Florida

Once the geocoding error was resolved, the GIS manager was able to match 86% of the day care center points and most of FDEP hazardous / waste data points and polygons to the corresponding parcel (Figure 9, Figure 10).

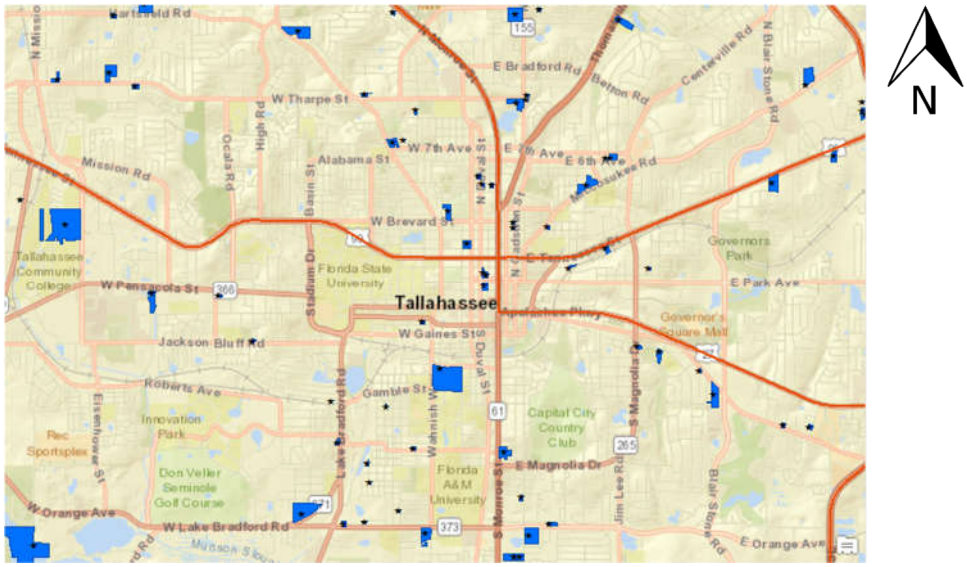

Figure 9: Day care center points and matching parcels in Tallahassee, Lean County, Florida

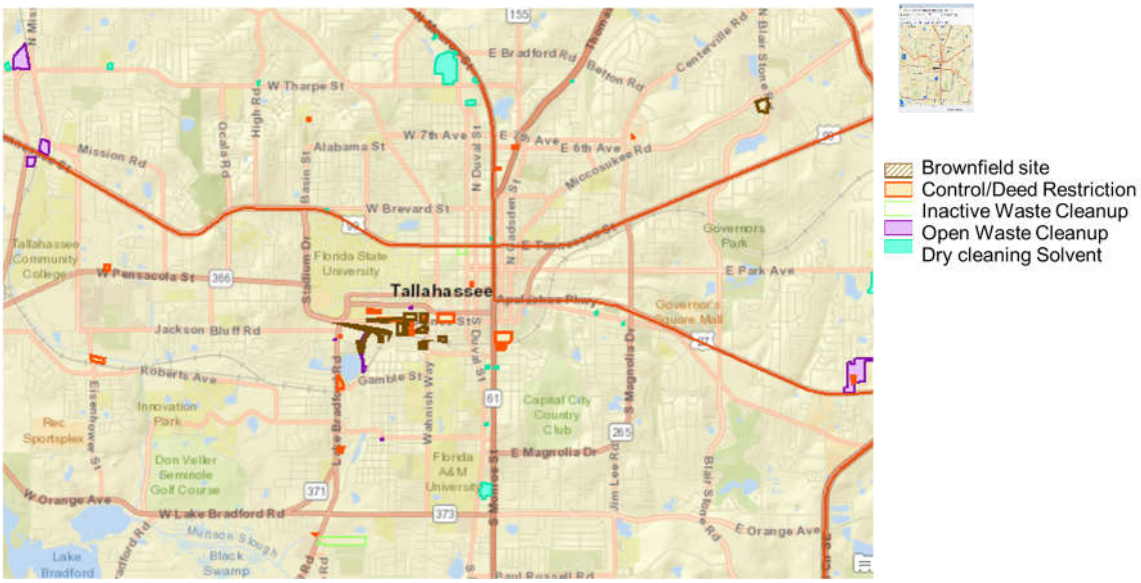

Figure 10: FDEP overall Hazardous / Waste Cleanup Site points and matching parcels in Tallahassee, Lean County, Florida

When the points and polygons were successfully matched with the associated parcel, a GIS query was run for Tallahassee, Leon County, Florida, to see if, as example, any Brownfields Sites were located within 500 feet of the property housing a child care facility (by creating a buffer around the parcels of the day care). The GIS query located two child care facilities neighboring a Brownfields Site within 500 feet (Figure 11).

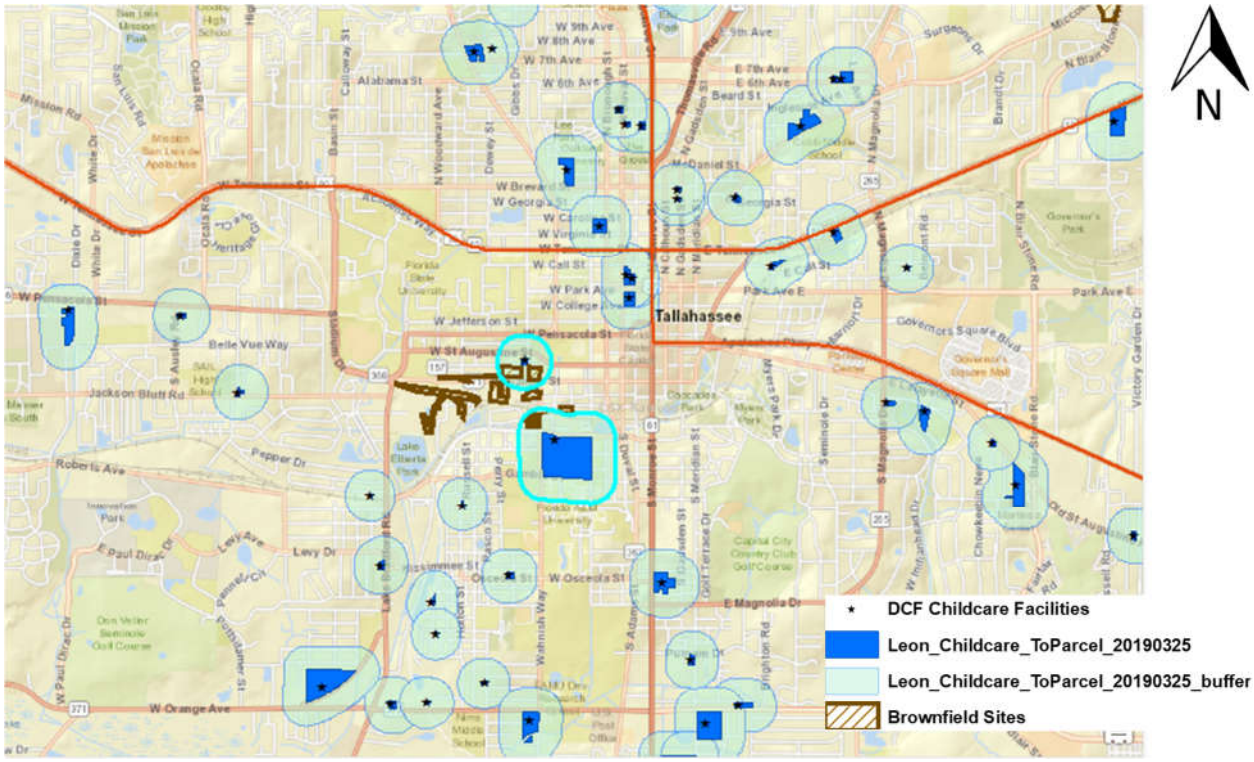

Figure 11: Day care facilities and Brownfields Site in Tallahassee, Leon County, Florida with a 600 feet buffer zone.

6.1.2 Florida's CSPECE GIS Tool - Where We Are and Path Forward

With help from FDCF working on their address verification process, FDOH has successfully geocoded addresses of child care facilities regulated by the Florida Department of Children and Families. We discovered that Florida has currently 9,063 active day care centers, of which 86% point locations are matched to parcels now. Further, we successfully merged the relevant FDEP data into the GIS Interactive Map to assess how many day care centers are in the proximity (600 feet) of a possible hazardous waste site in Leon County. Additionally, the data provided by the water inventory was successfully merged and will help later when investigating the drinking water source used at the child care facility.

FDEP has agreed to collaborate with FDOH on joining/merging the data through GIS Enterprise Portal. Meaning, all data will from now on will be updated automatically through the portal/Interactive Map, rather than manually by requesting the data prior their usage. In addition, any changes from either agency will be seen by the other automatically and in real-time.

FDOH will continue to work on assigning all statewide point data to the corresponding parcels. We further need to identify the points that did not have a corresponding parcel and determine how best to deal with these. We also will seek further clarification from FDEP for some of the waste sites related datasets. The horizontal accuracy measures need to be clarified, as well as what

exactly is represented by the GIS layer (i.e. brownfield areas and parcels with institutional controls).

FDOH will communicate with FDCF to encourage their collaboration via the GIS Enterprise Portal / Interactive Map, especially related to sites working on getting permitted through them initially.

When the Interactive Map has been fully developed and FDOH has ensured that all data have been considered, a Story Map will be developed for the public. The GIS Story Map combines maps with narrative texts, and multimedia content to tell a story.

6.2 Florida's CSPECE GIS Tool for Emergency Response

Contamination from existing and potential contaminated sites can pose a risk to public health, which could be enhanced during a natural disaster. Currently, the necessary capacity to immediately identify, respond to, evaluate, and minimize risks is lacking. Appropriate planning and knowledge about existing and potential contaminated sites prior to the natural disaster will improve the necessary capacity for response. The Florida CSPECE GIS map tool is being designed to identify ECE facilities located near hazardous waste sites and other sites that use chemicals of concern. The data collected for this tool can be utilized to develop simulation methodologies for use in preparedness exercises and educational outreach. Data are also used to develop a web application allowing users to navigate to a location within Florida and access site-specific public health information from multiple resources relating to contamination and other threats. Therefore, the Florida CSPECE GIS map tool can be utilized following a natural disaster and quickly identify sites of potential risk of chemical mobilization and nearby ECE facilities that may be at risk of disaster-triggered chemical exposure.

7 Path Forward – Phase Three to Phase Four

7.1 Phase Three: CSPECE Pilot Program

Phase Three will be conducted in 2019 – 2020. This phase will evaluate and discuss the process and progress of the implementation.

7.2 Phase Four: CSPECE Program Operation and Evaluation

Phase Four evaluates the implemented program, including evaluation of its effectiveness for the State of Florida. It will give a thorough description of tools implemented as well as steps taken to integrate Choose Safe Places for Early Care and Education and environmental exposure concerns into licensing improvement programs.

8 References

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APPENDIX 1: FLORIDA CHOOSE SAFE PLACES – PRELIMINARY PROTOCOL

PROTOCOL

PRELMINARY

Florida's Choose Safe Places for Early Care and Education

Planning | Guidance | Protection

Tuesday, July 23, 2019

Prepared by:
Florida Department of Health
Bureau of Environmental Health

Under Cooperative Agreement with
U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry

FOREWORD

The *Florida's Choose Safe Places for Early Childcare and Education Programs – Protocol* guides providers of early care and education centers (ECE), as well as local public health officials and communities through a process to ensure children's safety from environmental impacts. The assessment process engages governmental and non-governmental stakeholders in a series of tasks to investigate possible environmental hazards where children learn and play. The assessment considers hazards that could harm the children's health and what actions are necessary to protect these children in the present and future. Choose Safe Places encourages thoughtful consideration about where to locate ECE programs. It gives towns, cities, and states a framework to adopt practices that will make sure ECE programs are not located near chemical hazards.

ATSDR and the Florida Department of Health are committed to reduce children's risk of being exposed to dangerous chemicals during their care. ATSDR wants professionals in public health, community planning, licensing, zoning, environmental protection, early care and education, and other fields to ensure the safety of ECE locations within their communities and are committed to providing them support in doing so.

Table of Contents

ACKNOWLEDGMENT

Development of Florida's Choose Safe Places for Early Child Care and Education (CSPECE) Protocol started in April 2018. The first kick-off meeting with partners was held in January 2019. A 15-member planning group consisting of representatives from governmental and non-governmental agencies, and coalitions provide overall advice, direction and oversight as well as data access needed for CSPECE to succeed. As CSPECE is continuing to excel, the number of members will increase based on the needs identified.

Planning Group (as of March 2019)

Lead

Florida Department of Health *Bureau of Environmental Health* *Public Health Toxicology Section*	Gladys A. Liehr, Ph.D., FCCM Anita Poulsen, Ph.D. Jesseka D. Forbes, Pharm.D., RPh April Crowley

Members

Florida Department of Health *Bureau of Environmental Health* *Public Health Toxicology Section*	Kendra Goff, Ph.D., DABT, CPM, CEHP Elke Ursin, PMP, CPM Ferda Yilmaz Tim Wallace Michael Keith
Bureau of Epidemiology *Lead Poisoning Prevention Program*	Thomas Troelstrup
Florida Department of Environmental Protection	Brian Dougherty, Ph.D.
Florida Department of Agriculture and Consumer Services	Tentative Paul Rygiel
Florida Department of Education	Tentative Hope Colle
Florida Department of Children and Families	Miatta Jalaber
The Creative Center for Childhood Research and Training	Pamela Phelps
Early Learning Coalition Big Bend	Melanie Worley

EXECUTIVE SUMMARY

Children are the most sensitive populations when exposed to environmental hazards such as toxic substances. They are more vulnerable and sensitive towards toxic materials due to their small size and behavior that places them in closer contact with contamination and make them more susceptible to exposure. Some chemicals are more poorly metabolized in developing children than in fully developed adults, and thus may accumulate to higher degree in children. Some of those chemicals such as lead can be harmful for the development of children(Meyer et al., 2003).

Children (below the age of 18) spend most of their time in a care setting outside their homes (Axelrad et al., 2013). Places where young children may be cared for outside their homes are included in the "Early Care and Education" (ECE) term. In the United States alone, more than eight million children less than five years of age are cared for in a licensed child care facility (NCCCQI, 2015).

Limited data are available to determine the number of ECE facilities and children at risk to harmful exposures. Therefore, current estimates of possible risk for children in ECE programs are based on extrapolated data. Extrapolation methods have the advantage of requiring only relatively small observed datasets. An extrapolation may, for example, take data observed for one state and apply it to all other states, where data have not been observed. Thus, extrapolation methods, as they use less data, are associated with higher uncertainty.

The Agency for Toxic Substances and Disease Registry (ATSDR) created the Choose Safe Places for Early Care and Education (CSPECE) program to help protect children from health risks while at ECE facilities. The program is increasing awareness of chemical and radiological hazards, how to reduce exposure to existing hazards and the considerations necessary to avoid placing new facilities at hazardous locations. ATSDR created the CSPECE Guidance Manual that offers tools and resources to build programs to protect children in their communities (ATSDR, 2017). The Florida Department of Health (FDOH) has joined forces with the ATSDR "Partnership to Promote Local Efforts to Reduce Environmental Exposure (APPLETREE) Program" to execute its mission to protect, promote & improve the health of all people in Florida through integrated state, county, & community efforts. Due to previous experiences of FDOH with environmental hazards in ECE facilities, the FDOH efforts aim to achieve CSPECE program goals to protect the health of children, especially at ECE facilities. The goals include defining the selection process for ECE program locations, developing methods to help ensure ECE programs are placed on safe sites, and implementing a pilot Choose Safe Places Program.

The protocol entails the steps outlined below to ensure children's safety in places they learn and play:

Step 1:	**Monthly Check of FDCF Permit Status** FDOH checks FDCF Online Database for pending permit applications and selects the facilities for assessment. This step includes consultation with FDCF to identify facilities submitting a new permit application, identification of documentation location, as well as assignment to an assessor.
Step 2:	**Communication and Site Visit** The assessor communicates with the local County Health Department (CHD) and a site visit occurs to obtain preliminary assessment data (leads to Step 5). ***Steps 2 through 7 must be completed in parallel to meet the due date!***
Step 3:	**Identifying of ECE Permit status – New or Renewal!** This step identifies the next step that must be taken to move forward with the protocol.
Step 4:	**Desktop Analysis – Site History** The assessor uses FDEP databases and other tools to research the site history regarding any possible hazards (*e.g.*, past land use), identifies chemicals of concern, media contamination and other concerns.
Step 5:	**Site Description received from the CHD (Step 2)** An Environmental Health Survey is used to compile relevant information at or around the ECE facility. Consultation with the FDOH Radon program will be conducted.
Step 6:	**GIS Evaluation** The FDOH GIS Mapping Tool for ECEs is used to determine if the ECE is in proximity to a hazardous waste site or drycleaner. A ***HW-supplementary checklist*** assists with direction to gather the information needed.
Steps 7 to 10:	**Identifying Concerns** Protocol Flowchart III is used to answer assigned questions. The flowchart questionnaire assists in identifying possible concerns.
Step 11:	**Communication with Partners** Brief communication of concerns/no concern is made before moving on to Step 12.
Steps 12 to 17:	**Certification - Reporting - Outreach** Concerns/no-concerns are communicated in a short letter and full report available to relevant parties. A certification of "Successful Completion of CSPECE" will be provided, as well as training and other outreach performed.

PART I: OVERVIEW

A. Purpose

The Florida Department of Health (FDOH) has had previous experiences with environmental hazards in Early Care and Education (ECE) facilities. On November 12, 2015, the Florida Poison Information Center in Tampa notified FDOH in Hillsborough County about a boy aged 3 years with a urine mercury level of 79 µg/L (normal <10 µg/L)(Tewell, Spoto, Wiese, Aleguas, & Peredy, 2017). As a result, FDOH developed a factsheet that warned about the dangers of liquid mercury to young children. The Florida Department of Children and Families (FDCF) distributed this warning to 9,200 home child care operators.

Children at ECE facilities that are operating on land or in buildings that could be or were impacted by hazardous chemicals could be at risk and identifying such licensed child care facilities as early as possible is crucial. Even if an ECE program meets current state licensing regulations, the children and staff could be exposed to environmental contamination due to the location and location history of the ECE program. This can put staff and children, who are more sensitive to the effects of chemicals, at risk of health problems.

B. Target

To execute FDOH's mission to protect, promote & improve the health of all people in Florida through integrated state, county, & community efforts, FDOH joined a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) Partnership to Promote Local Efforts to Reduce Environmental Exposure (APPLETREE) Program. APPLETREE funds 25 state health departments to increase their capacity to advance ATSDR's goal of keeping communities safe from harmful chemical exposures and related diseases. Because ATSDR is committed to promoting the healthy development of children, ATSDR expanded the scope of this cooperative agreement to include Choose Safe Places for Early Care and Education (CSPECE). ATSDR's CSPECE program is one that, once implemented, protects the health of children in ECE facilities. It reduces the children's risk of being exposed to dangerous chemicals while in the facilities by providing tools and recourses to public health professionals for early evaluations of the facilities' surroundings. The CSPECE program emphasizes identification of the environmental hazards and environmental auditing as described by the National Center on Early Childhood Quality Assurance (NCECQA). According to NCECQA, an environmental audit should be conducted before construction of a new building; renovation or occupation of an older building; or after a natural disaster, to properly evaluate and, where necessary, remediate ("clean up") or avoid sites where children's health could be compromised (EPA, 2011; Somers, Harvey, & Rusnak, 2011).

C. Outcome

During the past year and as part of a continuous effort, FDOH is working to achieve the CSPECE program goals in Florida: (1) defining the selection for ECE programs locations, (2) developing methods that help ensure that ECE programs are placed on safe sites, and (3) implementing a pilot Choose Safe Places for Early Care and Education (CSPECE) program study. ATSDR is providing technical support and guidance to the APPLETREE states to help them start their own Choose Safe Places programs. CSPECE in Florida is implemented in four phases (Figure 1). Each phase helps to form partnerships, identifies ways to strengthen licensing policies, and builds on existing resources. All steps lead to the implementation of the program, including community outreach and the education/training of staff and other agencies. The phases are assigned as shown in Figure 1.

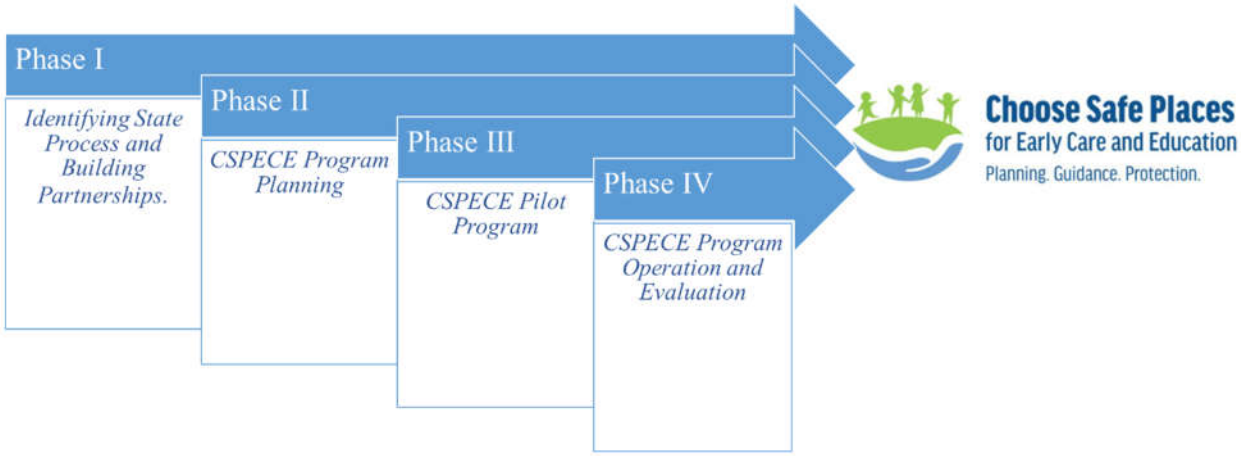

Figure 1: Overview of the Implementation of Choose Safe Places for Early Care and Education (CSPECE).

D. Planning Group

When implementing the CSPECE protocol, it is suggested having a "Planning Group" for the area/county of interest. As of now, FDOH has reached out to potential governmental and non-governmental partners to create an initial Choose Safe Places Planning Group (Attachment A). The 'Florida CSPECE Planning Group' meets once a month in person or via web conference to ensure that the CSPECE program considers all necessary steps needed to protect children and to ensure that the program can be implemented state-wide. Each meeting provides an overview of program status as well as progress made since last meeting. Partners and coalitions will continue to receive regular emails with information material and will be contacted directly regarding urgent questions and/or concerns. Additionally, important contacts on county and district levels are listed in Attachment A.

E. Program Strengths, Weaknesses, Challenges, Limitations, and Gaps in Data Collection

Program Strengths: The Florida Choose Safe Places Program has the advantage of a strong planning group with partners from several state agencies. Having a strong advisory group facilitates not only database access and data sharing, but also enables consultation and support from experts across all relevant fields.

In Florida, there are many very versatile online databases available to support most data requirements.

FDOH has the advantage of having a GIS team to help develop the mapping tools needed to locate ECE facilities near hazardous waste sites and other sites of concern.

Program Weaknesses: The sheer number of ECE facilities in Florida (9,084; FDCF database as of March 2019), and the short timeline to process new facilities will present a challenge for the program. Once the program is well established however, the need for assessment will be reduced to new facilities.

The State of Florida has limited data available to address concerns of possible nearby pesticide applications.

Owner privacy policies are expected to provide challenges with respect to site history assessments, including knowledge about the presence of asbestos and lead-based paint.

PART II: METHODOLOGY

F. Florida CSPECE – Preliminary Protocol

The Florida CSPECE-Protocol consists of 17 main steps:

Step 1:	- Monthly Check of FDCF Permit Status
Step 2:	- Communication and Site Visit, CHD Involvement
Step 3:	- Identification of ECE Permit status – New or Renewal
Step 4:	- Desktop Analysis – Site History
Step 5:	- Site Description received from CHD (Step 2)
Step 6:	- GIS Evaluation
Step 7 to 10:	- Identifying Concerns
Step 11:	- Communication with Partners
Step 12 to 17:	- Certification – Reporting – Outreach

The protocol is visualized using a flowchart matrix (Attachment B, Flowchart I, II, and III), as well as a comprehensive checklist (Attachment C) to ensure consistency during the ECE program evaluation. The checklist is not intended as a standalone document but is to be used in conjunction with the flowchart protocol. The checklist consists of easy to follow steps and is intended as a tool to help the assessor perform the assessment and to measure performance (time taken, meeting deadlines). Flowcharts I and III in Attachment B are intended as tools for completion of the checklist; Flowchart III provides a more in-depth guidance for the site assessment process. Flowchart II provides sideline information regarding the group care licensing process at DCF.

For the final report and for successfully compiling all environmental information needed for the detailed assessment, the following forms must be used, filled, and provided:

Protocol checklist
Hazardous Waste -Supplementary Checklist
Hazardous Waste -Supplementary Checklist Manual
Environmental Health Survey
Preliminary Notification Letter
Participation Certificate

a. Checklist and Checklist Manual

The checklist consists of easy to follow steps and is intended as a conjunctive tool to the flowchart protocol to help the assessor perform the evaluation and to measure performance (time taken, meeting deadlines).

Attachment C includes the checklist and a manual for how to use it. The HW-supplementary checklist (Attachment C) shall be used during investigations using the Florida Department of Environmental Protection's (FDEP) databases and reports. These data may be used to identify more specific information regarding the chemical of concern and the environmental media impacted.

Both checklists in Attachment C must be filled and will be used as a short summary for consultation with FDEP and other partners, if applicable, and as attachments in the final report.

b. Environmental Health Survey

The Environmental Health Survey Form (Attachment D) will be used at site visits to gather information for the site description. The person who conducts the visit will complete Step #1 - 4 of the form, and FDOH will complete the remaining sections.

c. Preliminary Notification Letter and Participant Certification

A template of a letter informing of preliminary results is currently being developed. Further, discussions are ongoing with ATSDR to develop a nationwide CSP 'Certificate of Participation' template. Once the letter and the certificate are finalized, we will provide the letter online and attach an example of the letter and certificate to the protocol.

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Attachment A. Contact Information

Affiliation	Name and Contact	Planning Group Member
CSP Program Coordinator ATSDR	Audra Henry Technical Project Officer 4770 Buford Hwy NE, MS F-59 Atlanta, GA 30341-3717 (770) 488-3758	✓
FDOH Hazardous Waste Sites Health Risk Assessment Team Bureau of Environmental Health, Tallahassee HQ	Gladys Liehr Environmental Administrator, Health Assessment Team Lead 4052 Bald Cypress Way, Bin A-08 Tallahassee, FL 32399-1710 (850) 245-4249	✓
	April Crowley Health Educator 4052 Bald Cypress Way, Bin A-08 Tallahassee, FL 32399-1710 (850) 901-6494	✓
	Jesseka Forbes Health Assessor 4052 Bald Cypress Way, Bin A-08 Tallahassee, FL 32399-1710 (850) 901-6598	✓
	Anita Poulsen Health Assessor 4052 Bald Cypress Way, Bin A-08 Tallahassee, FL 32399-1710 (850) 901-6898	✓
FDOH Radon Program Bureau of Environmental Health, Tallahassee HQ	Ferda Yilmaz Environmental Administrator, Radon Program Team Lead 4052 Bald Cypress Way, Bin A-08 Tallahassee, FL 32399-1710 (850) 245-4280	✓
FDOH Bureau of Epidemiology, Tallahassee HQ	Thomas Troelstrup Reports and Analysis Unit Lead 4052 Bald Cypress Way, Bin A-08 Tallahassee, FL 32399-1710 (850) 901-6802	✓
FDEP Primary Contact Tallahassee HQ	Brian Dougherty Program Manager 2600 Blair Stone Rd Tallahassee, Fl 32399 850-245-7503	✓
FDCF Primary Contact	Miatta Jalaber Program Safety Manager 2383 Phillips Road Tallahassee, FL 32301 (850) 273-9335	✓

Affiliation	Name and Contact	Planning Group Member
Early Learning Coalition of the Big Bend	Melanie Worley Early Care and Education Manager (850) 552-7320	✓
The Creative Center for Childhood Research and Training	Pamela Phelps 2746 West Tharpe Street Tallahassee, Florida 32303 (850) 422-1080 or (850) 386-1450	✓
FDCF Regional Contacts		
FDCF Central Region	Bill D'Aiuto Regional Director 400 W. Robinson St, Suite 1129 Orlando, FL 32801 (407) 317-7000	
FDCF Northeast Region	Patricia Medlock Regional Managing Director 5920 Arlington Expressway Jacksonville FL 32211 (904) 723-2000	
FDCF Northwest Region	Walter T. Sachs Regional Managing Director 2383 Phillips Road Tallahassee, FL 32301 (866) 286-3609	
FDCF Southeast Region	Dennis Miles Regional Managing Director 111 S. Sapodilla Avenue West Palm Beach, FL 33401 (561) 837-5078	
FDCF Southern Region	Bronwyn Stanford Managing Director N1007 Miami, FL 33128 (305) 377-5055	
FDCF SunCoast Region	Lisa Mayrose Regional Managing Director 9393 North Florida Avenue Tampa, FL 33612 (813) 558-5500	

Attachment B. Flowcharts

FLORIDA CHOOSE SAFE PLACES—PROTOCOL OVERVIEW—FLOWCHART I

SEE FLOWCHART II

DCF Online Database

DCF Group Care Licensing Process

Maintain and update

DCF

#1.1

#1.3 *Communication*

STEP #1

DOH Monthly Check of DCF Permit Status

#1.5 *Assigns and Communicates with DOH-C Assessor*

DEP Online Database

Site Visit

#2.2

CHD

#2.1 Communication

DOH Assessor

#6

GIS Interactive Map

#6.1

#2.3-2.5

Photos Concerns EH Survey

#2.6

#3

New or Renewal Permit

New

New Permit

#4

#5

#5

SEE FLOWCHART III FOR DETAILED EVALUATION

#6.1

HW Site with-in 600ft Y/N

Site History

#4.3

Past Land Use Y/N

#4.4-4.5

Chemicals of Concern Y/N

#4.6

Possible Health Effects Y/N

#4.7

Mitigation Status Open Y/N

Renewal

Site Description

#5.4

Drycleaner or Other in Building Y/N

#5.8-5.9

Radon test performed, and results are acceptable Y/N

#5.5

Drinking/Irrigation Well Y/N

#5.6

Playground Y/N

#5.7

Open Parcel Y/N

Media of Concern Y/N

#6.2

No

#6.3

Groundwater Y/N

Volatile Chemical Y/N

#6.5

#6.4

Soil Y/N

No

No

DOH Radon

Radon is a concern

#9

#8.1

CONCERN Y/N

#8.2

Other chemical concerns

#10

DEP

#8.3

No

DOH REPORTING

#12

#13

Short Letter

#14

Full Report

#17

Community Education

DOH

DOH Radon

CHD

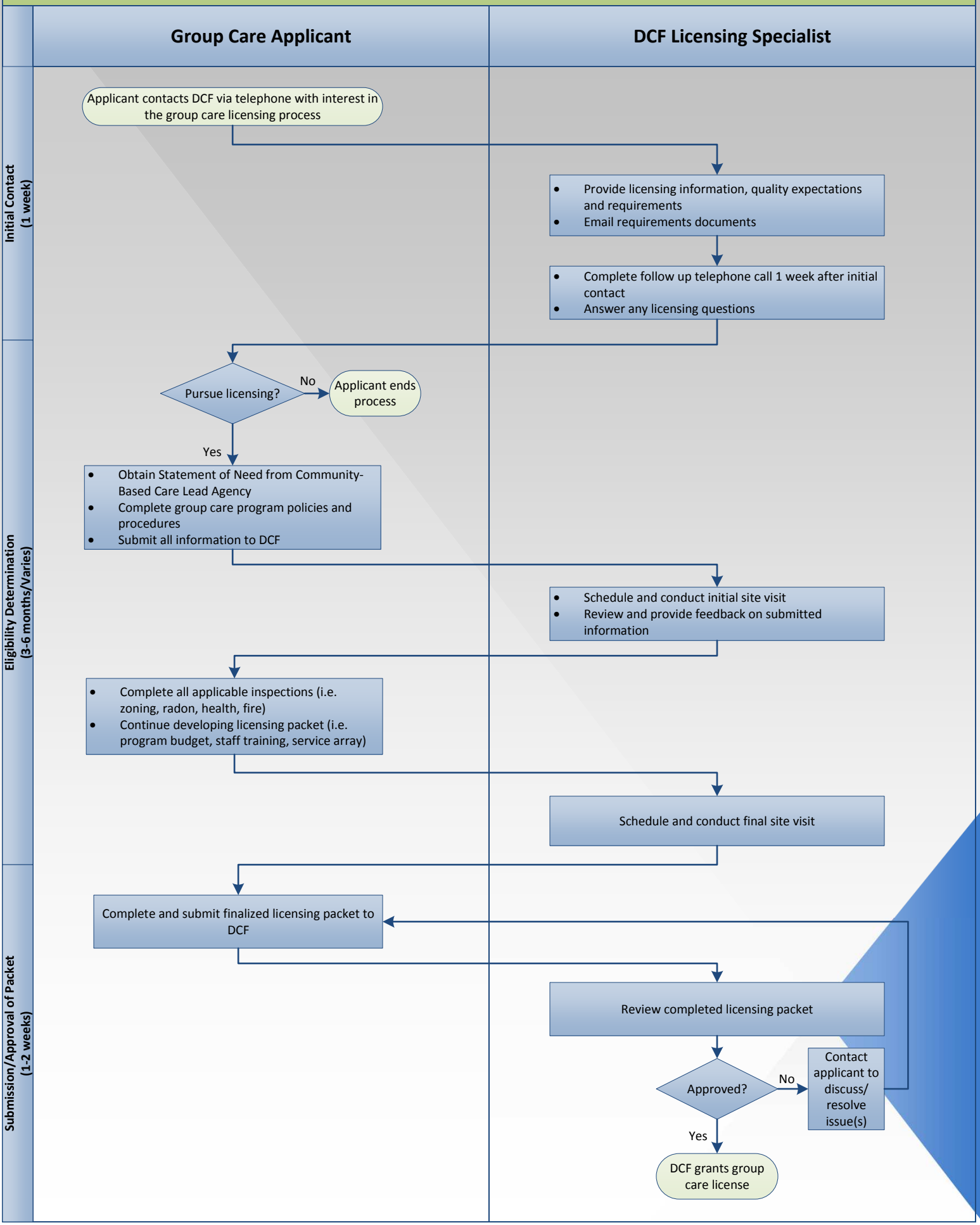
DCF

DEP

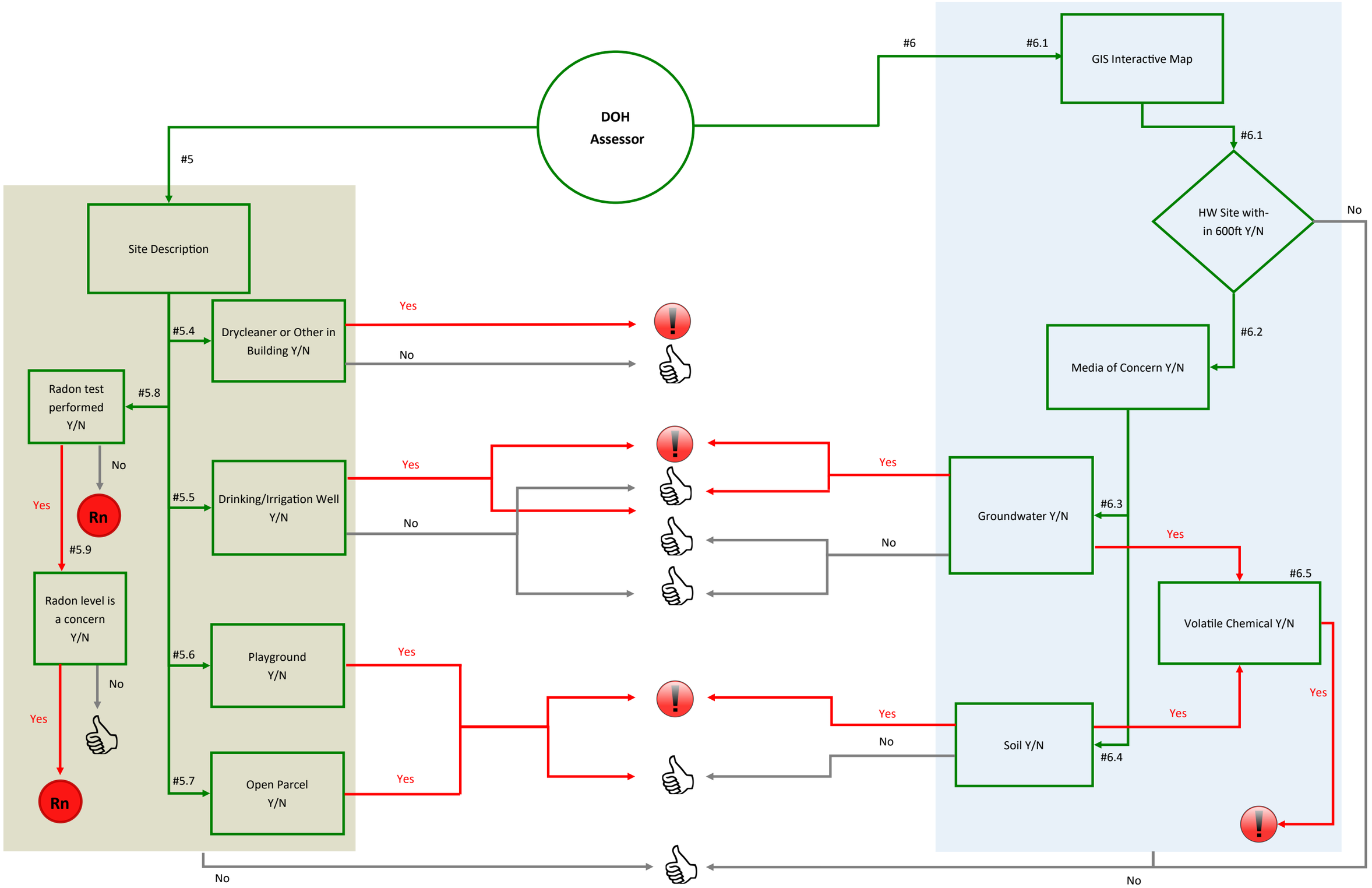
Florida Department of Children and Families (DCF) - FLOWCHART II
Group Care Licensing Process

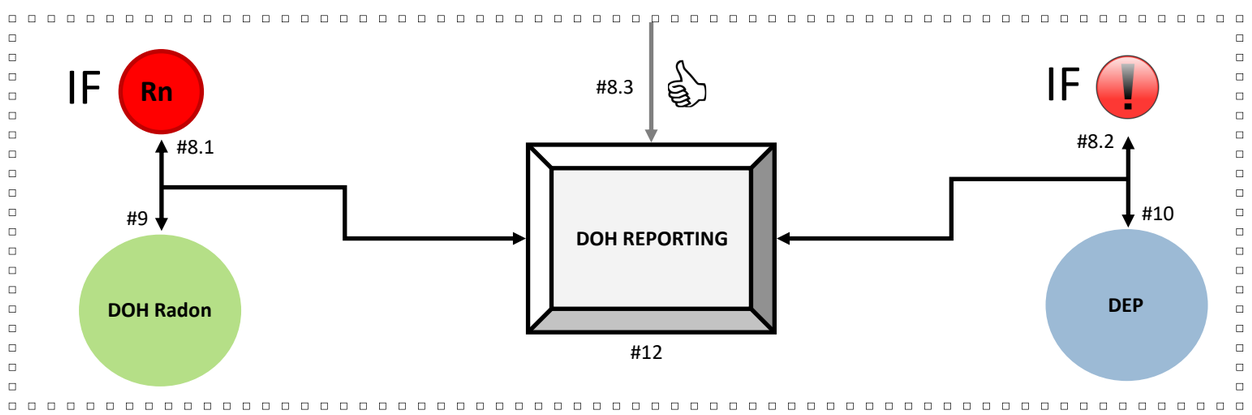
Legal Reference: Florida Statute 409.175; Florida Administrative Code 65C-14

October 2015



FLORIDA CHOOSE SAFE PLACES—PROTOCOL DETAIL—FLOWCHART III





No apparent concern

Rn Radon is a concern, further evaluation may be needed

Other chemical concern, further evaluation may be needed

Attachment C. Checklists

DRAFT FLORIDA CHOOSE SAFE PLACES - CHECKLIST

Step #	CHECKLIST ACTION	DESCRIPTION	STATUS
	A. PERMIT STATUS PERSONNEL ONLY		
1	**DOH Monthly Check of Permit Applications**		
1.1	Check DCF Online Database for pending permit applications	Located on the DCF website	☐
1.2	Select facility permit for assessment	Enter in the blue box below (one facility per checklist)	☐
1.3	Consult with DCF to determine facility permit status (new or renewal)	Enter in the blue box below (one facility per checklist)	☐
1.4	Create a SharePoint folder	CSP-County-City-PermitID-FacilityName-Year	☐
1.5	Assign health assessor to the selected facility via email	Attach to the email all obtained information, if not on this form. Notify the assessor of the due date for the short letter.	☐
	ECE FACILITY ASSIGNMENT		
	ECE facility:		
	Permit #:	**Date of Assignment:**	
	Date of Permit Application:	**Due Date:**	
	New/Renewal:	**DOH Assessor:**	
	B. DOH ASSESSOR ONLY		
2	**DOH and CHD Communication, and Site Visit**		
2.1	DOH to contact CHD by email	Once contacted assessor continues to Step 3	☐
	Name of contact person - Type name/email address in the column to the right.		
2.2	CHD to perform site visit	New permit: Complete within 7 calendar days Renewal Permit: Complete within 14 calendar days	☐
2.3	CHD to take photos		☐
2.4	CHD to note concerns		☐
2.5	CHD to complete the environmental health survey		☐
2.6	DOH to receive information from CHD within the deadline (see column to the right)		☐
3	**Is the ECE New or is it a Permit Renewal?**	For renewals, continue Step 4.1; For new ECEs continue to Step 4.2	
4	**Site History**		
4.1	Renewal: Review the known site history	Go to Step 4.3.	☐
4.2	New: Compile and review the site history		☐
4.3	Was there past land use? If applicable, describe in the column to the right.	*If applicable, describe here. Cell may be expanded and overwritten*	Yes/no box
4.4	Are there chemicals of concern?	*If applicable, describe here. Cell may be expanded and overwritten*	Yes/no box
4.5	Are site-specific chemical concentrations available?	If yes, proceed to HW checklist before continuing	Yes/no box
4.6	Is there a potential for health effects?	*If applicable, describe here. Cell may be expanded and overwritten*	Yes/no box
4.7	Is mitigation status open?	To determine if site mitigation is necessary but incomplete.	Yes/no box
5	**Site Description**		
5.1	Complete site description		☐
5.4	Is there a dry cleaner nearby or in same building?		Yes/no box
5.5	Is there a drinking or irrigation well?		Yes/no box
5.6	Is there a playground?		Yes/no box
5.7	Is the property on an open parcel?		Yes/no box
5.8	Has a radon test been performed?		Yes/no box
5.9	If yes above (#5.8), is the radon level of concern?		Yes/no box
6	**GIS Map Evaluation**		
6.1	Is the ECE within 600ft of a HW Site?	Check the GIS Interactive map	Yes/no box
		If yes, check the DEP Online Database, and proceed to the HW Checklist before continuing below. If no, continue to Step 7.	
	Site name:	FDEP Database #	
6.2	Is there a media of concern?		Yes/no box
6.3	Is there groundwater contamination?		Yes/no box
6.4	Is there soil contamination?		Yes/no box
6.5	Are volatile chemicals present in soil and/or groundwater?		Yes/no box
7	**Other Concerns**		
7.1	Was the building built before 1978?	Consider lead-based paint	Yes/no box
7.2	Was the building built before 1989?	Consider asbestos	Yes/no box
8	**Evaluate any Possible Concerns - use the above findings to complete the check described in Flowchart III**		☐
8.1	**Radon Concern (level is too high, or no test has been performed)**	**Go to Step 9**	Yes/no box
8.2	**Other Chemical Concern**	**Go to Step 10**	Yes/no box
8.3	**No Apparent Concern**	**Go to Step 11**	Yes/no box
9	**If applicable, consult with the DOH Radon group within 5 business days**		☐
10	**If applicable, consult with DEP within 5 business days**		☐
11	**Communicate concerns/no concerns with the DOH Permit Status Personnel**	**Go to Step 12**	☐
12	**Complete all reporting, and email it to Permit Status Personnel**	**Start with Step 13**	
13	**Short Letter (summary of findings)**	**Within 2 (new) or 4 (renewal) weeks of assignment**	☐
14	**Full Report**	**Within 6 weeks of assignment**	☐
	Assessment Completed	**Date**	
Assessor Initials			
	C. PERMIT STATUS PERSONNEL TO SHARE FINDINGS (within 2 business days of receiving)		
15	**Provide short letter notification to DCF (by email)**	**Also add to Sharepoint**	☐
	Received Date		
	Due Date		
	Date Completed		
16	**Share full report with all partners (by email)**	**Also add to Sharepoint**	☐
	Received Date		
	Due Date		
	Date Completed		
	Reporting Completed	**Date**	
		Permit Status Personnel Initials	
	D. PERMIT STATUS PERSONNEL TO ASSIGN EDUCATOR (within 2 business days of full report)		☐
	Date full report was received	**Date of Assignment:**	
		Due Date:	
		Educator:	
	E. ASSIGNED EDUCATOR TO PROVIDE EDUCATION SUPPORT TO THE ECE FACILITY (within 4 weeks of the full report)		
17	**Compile Educational Materials and Organize Information Session**		☐
	Date of Full Report		
	Education Due Date		
	Education Support Completed	**Date**	
		Educator Initials	
Environmental Administrator Signature			

SECTION A. FOR PERMIT STATUS PERSONNEL

1. DOH Monthly Check of DCF Permit Status

Step 1.1. Check DCF Online Database for pending permit applications:	Designated DOH personnel will check DCF permit status monthly by accessing the DCF online database. This check will identify facilities with pending permit applications.
Step 1.2. Select facility permit for assessment:	If more than one pending permit is identified, a checklist must be initiated for each facility. At this point, enter ECE facility name, permit number and date of permit application in the designated blue box (ECE Facility Assignment).
Step 1.3. Consult with DCF to identify facility permit status (new or renewal):	Consult with DCF to identify if the pending permits are for new or existing (renewal permit) facilities. For each facility checklist, enter in the designated blue box (ECE Facility Assignment) if the facility is new or existing.
Step 1.4. Create a SharePoint folder:	Create a folder on the DOH SharePoint. Use this filename format: CSP-County-City-PermitID-FacilityName-Year. Example: CSP-Leon-Tallahassee-XXXX-TallahasseeDaycare-2019 The SharePoint folder may be used by DOH personnel to add completed files and forms to update and share with the group.
Step 1.5. Assign health assessor to the selected facility by email:	Attach to the email all obtained information, if not on the form. Notify the assigned assessor of the due date of the short letter communication.

➔ **Finalize Part A by completing the blue box (ECE Facility Assignment)**

SECTION B. FOR DOH ASSESSOR

2. DOH and CHD Communication, and Site Visit

The assessor has limited time to complete the initial assessment. Steps 2 through 7 must be completed in parallel to meet the due date. It is critical that the assessor completes Step 2.1, as soon as the assignment has been placed.

Step 2.1. DOH to contact CHD by email:	***This step is time sensitive!*** The CHD has limited time to complete the site visit. Therefore, immediately identify the relevant CHD, and notify, at the time of assignment, the due date. The due date will be 7 calendar days for new permits and 14 calendar days for renewal permits. Once the CHD has been assigned, move to Step 3. The assessor must complete the other steps of the assessment while waiting for the site visit information. The short letter must be completed within two weeks of assignment for new facilities and within four weeks of assignment for renewals.
Steps 2.2-2.5. CHD site visit:	Pack a camera and an ***environmental health survey form*** (Attachment D and Section 4.3). Go to the facility grounds. Take photos of the grounds and neighboring sites. Use the Environmental Health Survey Form to help consider all possible concerns. Note any additional concerns that may be relevant.
Step 2.6. CHD to share site visit information with DOH:	CHD must share the completed survey form, photos and any additional information from the site visit with DOH within the requested timeline. Once all materials have been received, the health assessor may check the boxes in Section 2 of the checklist.

3. Is the ECE new or is it a renewal permit?

Step 3:	Renewal: Continue to Step 4.1 New: Continue to Step 4.2

4. Site History

Step 4.1. Renewal: Review the known site history:	Even if the site history has been previously compiled and reviewed, this information must undergo review and should be included in the current assessment.
Step 4.2. New: Compile and review the site history:	Compile and review the site history. Use the steps below as a guide for all the relevant information needed.
Step 4.3. Was there past land use?	If applicable, describe past land use in the column to the right. The column may be overwritten expanded. Include all past land use.

SECTION B. FOR DOH ASSESSOR – Continued.

Step 4.4. Are there chemicals of concern?	If applicable, describe all chemicals of concern in the column to the right. The column may be overwritten and expanded.
Step 4.5. Are site-specific chemical concentrations available?	The DEP Information Portal may be used to obtain this information: http://prodenv.dep.state.fl.us/DepNexus/public/searchPortal If yes, go to the ***hazardous waste site (HW) supplementary checklist*** (Attachment C and Section 4.2). Fill in all necessary information.
Step 4.6. Is there a potential for health effects?	Use the obtained information to assess if historical use could lead to potential health effects at this site.
Step 4.7. Is mitigation status open?	Check DEP online databases to check mitigation status. If mitigation status is open this means mitigation was found necessary but has not yet been completed. Open status would flag a concern.

5. Site Description

Steps 5.1-5.6.	Complete the site description. Utilize information received from the CHD. Answer the questions with yes or no.
Step 5.7. Is the property on an open parcel?	This information is relevant for assessing if contaminants may reach the parcel and could be available for contact.
Steps 5.8-5.9. Has a radon test been completed?/Is the radon level of concern?	Consult with the DOH Radon Program to check the property address in the system. There is a radon concern, if a test has not been completed, or if the radon level found was above the guideline.

6. GIS Map Evaluation

Step 6.1. Is the ECE within 600 feet of a hazardous waste site?	Use the DOH GIS Mapping Tool for ECEs to determine if the ECE is in proximity to a hazardous waste site or drycleaner. The GIS Mapping Tool is still undergoing improvement. A protocol will be developed for this tool. If no, continue to Step 7. If yes, consult with the DEP databases including the information portal and start a ***HW supplementary checklist*** for the site (Attachment C and Section 4.2). Then continue the current checklist from #6.2.
Steps 6.2-6.5:	Answer the questions with yes or no. Remember to also fill a HW supplementary checklist (Attachment C and Section 4.2).

SECTION B. FOR DOH ASSESSOR – Continued.

7. Other Concerns

Step 7.1. Was the building built before 1978?	Buildings built before 1978 may have been painted with lead-based paint. Consider potential effects from lead exposure.
Step 7.2. Was the building built before 1989?	Buildings built before 1989 may contain asbestos. Particularly buildings from the 1950-1970s may have been built with materials containing asbestos. Consider if an asbestos check is necessary. Asbestos is only a concern if un-contained.

8. Evaluate Any Possible Concerns – Flowchart III

Complete the check described in Flowchart III (Attachment B). Answer the questions in the flowchart and follow the arrows for each yes/no answer.

The arrows should help guide you to determine if there is a concern or not. Remember that a yes does not necessarily mean there is a concern. For example, if there is a drinking water well to be used by the facility, this is only a concern if there is also groundwater contamination. Similarly, groundwater contamination is not a concern unless that water is used at the facility for drinking or irrigation. Remember that children may play in water from sprinkler systems or touch irrigated grounds.

Step 8.1. Radon concern:	If radon is a concern, go to Step 9. ***This step is time sensitive!***
Steps 8.2. Other chemical concern:	If there is other chemical concern than radon, go to Step 10. ***This step is time sensitive!***
Step 8.3. No apparent concern:	If all points assessed were concluded to be of no concern, the assessor may continue to Step 11.

9. Radon Concern

Step 9:	If there is a radon concern, consult with DOH Radon ***within five business days***.

10. Other Chemical Concern

Step 10:	If there is other chemical concern than radon, consult with DEP ***within five business days***.

11. Communicate concerns/no concern with DOH Permit Status Personnel

Step 11:	Communicate in brief concerns/no concern with DOH Permit Status Personnel (who assigned you to this assessment) before moving on to Step 12.

12. Complete all reporting and email it to DOH Permit Status Personnel

Step 12:	Start with #13.

13. Short Letter

Step 13: Write a short summary of the findings and email these to the DOH Permit Status Personnel (who assigned you to this assessment). A template will be developed for the short letter.

The short letter must be received within two and four weeks of assignment for new and renewal permits, respectively.

14. Full Report

Step 14: A template will be developed for the full report. Email the full report to the DOH Permit Status Personnel (who assigned you to this assessment), who will share the report with the partners and post it online.

The final full report must be received within six weeks of facility assignment.

➔ **Finalize Part B of the checklist with initial and date for completion of the report.**

SECTION C. For Permit Status Personnel – Share Findings

The Permit Status Personnel must share findings with the partners ***within two business days of receiving*** these from the assessor. All reporting should also be posted online.

15. Provide short letter notification to DCF

Step 15: Email the short letter to DCF ***within two business days of receiving***. Fill in the dates.

16. Share the full report with the partners

Step 16: Email the full report to all partners ***within two business days of receiving***. Fill in the dates.

➔ **Finalize Part C with initial and date for sharing letter and report. Go to Part D.**

SECTION D. For Permit Status Personnel – Assign Educator

The Permit Status Personnel must assign an educator ***within two business days of receiving the full report***. The role of the educator is to organize and provide education support to the facility.

➔ **Finalize Part D of the checklist by completing the blue box.**

SECTION E. For the Assigned Educator

Step 17. Compile educational materials and organize information session:	The role of the educator is to organize and provide education support to the facility. Educational materials will be developed before the pilot program is implemented. The educator must also compile any specific chemical factsheets that may be relevant for the facility. ***The educator must organize an open house style information session within four weeks of the full report.***

➔ **Finalize Part E of the checklist by completing the blue box.**

To finalize the checklist and facility assessment, the checklist must be signed by the Environmental Administrator.

Choose Safe Places for Early Care and Education - Hazardous Waste Sites Supplementary Checklist

Daycare	
Permit #	
Reviewer	
Site	
DEP Site ID	
Site Status	

Distance to Site	
Potable Well	
Irrigation Well	
Surface Water	

A	CONTAMINATED MEDIA		
	Soil		
	Groundwater		
	Surface Water		
	Sediment		

B	Groundwater					
	Chemical of Concern					
	Onsite/Offsite					
	Flow					
	Flow Towards ECE?					

C	Soil				
	Chemical of Concern				
	0-2 ft				
	Below 2 ft				
	Leachability				
	Proposed Cleanup				

Consultation with DEP needed?		*comment:*

Additional Comment:

Attachment D. Environmental Health Survey Form

Choose Safe Places for Early Care and Education

ENVIRONMENTAL HEALTH SURVEY:

The following survey, in collaboration with Florida Department of Environmental Protection and Florida Department of Children and Families, is intended for use in the licensure process of early childcare centers. The survey includes property and building information that could suggest a former or current industrial, manufacturing and/or agricultural use, and which may warrant further evaluation. The survey also includes businesses using hazardous chemicals that could impact a childcare center if the business is co-located in the same building or complex as the childcare.

This form may or may not be a part of the licensing procedure for a proposed child care.

Date		**Name of Childcare Center**	
County			
Address of Childcare Center			
License No. (if applicable)		**Licensure Date (if applicable)**	

Instructions: If an item is observed, check the applicable box. Space is provided at the end of the form for any additional information you think would be helpful. Taking a photograph or making a simple sketch can be helpful. You do not need to complete this form if no items are observed.

1. Outside Property: The following items are visible at and adjacent to the property, where the childcare center is located.

- ☐ Metal drums or barrels
- ☐ Old car/vehicle parts
- ☐ Discarded white goods (*i.e.*, old appliances)
- ☐ Construction and demolition debris pile (*e.g.*, bricks/concrete, wood, plaster/drywall, plumbing fixtures, roofing, glass, electrical wiring, piping, asphalt pavement, insulation).
- ☐ Barn(s), farm machinery/equipment
- ☐ Other (batteries, paint cans, syringes, *etc.*)

2. Outside Property Surface Cover: Check the boxes that best describe the outdoor surface cover.

- ☐ The property is walkable
- ☐ The outdoor property is covered (*e.g.*, grass, asphalt, soft rubber)
- ☐ Cover type: _____
- ☐ The property cover is in good condition
- ☐ The property cover has holes in it/exposed parts
- ☐ The property outdoor surface is open gravel

3. Childcare Building: The following are located at or adjacent to the building within which the childcare center will operate.

- ☐ Auto repair/paint shop
- ☐ Copy/print shop
- ☐ Dry cleaner
- ☐ Factory/manufacturing/industrial business
- ☐ Farming/agriculture
- ☐ Fire station/Fire training facility
- ☐ Former funeral home
- ☐ Gas station
- ☐ Landfill/dump
- ☐ Loading dock, large delivery doors
- ☐ Metal plating/welding business
- ☐ Nail/hair salon
- ☐ Old brick construction, resembles old factory building
- ☐ Old mill building/mill complex
- ☐ Recycling facility
- ☐ Shooting range
- ☐ Wood/paper treatment
- ☐ Unknown

4. Additional Comments: Is there anything else we should know?	
5. Building History: Lead and asbestos check (for FDOH personnel):	
Was the building built before 1978? *Buildings built before 1978 may have been painted with lead-based paint.*	
Does the building contain asbestos? *Asbestos was banned from production in 1989. Particularly housing built from the 1950s to the 1970s may contain asbestos, unless this was professionally removed.*	
6. Property History (for FDOH personnel):	
Name of the property owner	
Name of the business	
What year(s) did the business operate?	
Give details of activities on the property, describe any manufacturing or production that took place, and any other details about the previous business.	

For Office Use Only			
Evaluator:		Date	
FDOH Reviewer:		Date:	
Reference No.			

APPENDIX 2: EVALUATION AND PERFORMANCE MEASUREMENT PLAN (EPMP)

APPLETREE
Evaluation and Performance Measurement Plan (EPMP)
Florida Department of Health

I. Introduction

The Florida Department of Health (DOH) prepared this Evaluation and Performance Measurement Plan (EPMP) to meet the requirements set by the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) as a condition of the APPLETREE (ATSDR's Partnership to Promote Local Efforts to Reduce Environmental Exposure) cooperative agreement with DOH. This EPMP demonstrates how Florida DOH will collect and evaluate/assess outcome and performance measures. Results can be used to improve the program quality, make better management decisions, and support new approaches. Subsequently it will be used to strengthen Florida's DOH mission to protect, promote & improve the health of all people in Florida through integrated state, county, & community efforts. Further, the EPMP can be used to determine whether the program is achieving its goals or objectives and whether new approaches need to be implemented. It is a valuable tool to evaluate process, impact and cost-effectiveness.

II. Presentation of Florida Department of Health Measures

FDOH concluded to present the measures in a schematic matrix (see Appendix I) and identified four main measure categories:

1. Outcome – High-level desired results for FDOH and the community:
   - ✓ Increase awareness
   - ✓ Increase knowledge
   - ✓ Change behavior
   - ✓ Increase the ability to respond
2. Measured Indicator/Output – Measurable results that could indicate whether outcomes are being reached
3. Input/Activity – Things that can be done to lead to the desired measured indicator/output
4. Performance Measure – Desired value resulting from the input/activity

Color coding was used to visually identify associations between these desired outcomes and the associated measured indicators/outputs as well as their performance measures. Independent from these, different inputs/activities to the measures were classified to four main inputs/activities groups:

- Survey
- Meeting-Training-Networking-Communication
- Planning and Research
- Lessons Learned-Evaluation-Reporting

III. Assurances

a. Ability to collect the measures

DOH has the ability to collect these measures.

b. Partnerships for data collection

DOH has the established working relationships with both the federal EPA and the state DEP to check on the status of recommendations and solicit honest feedback on program performance.

c. Use of evaluation findings for program improvement

Florida DOH will use the results of the measures to improve program performance and effectiveness, and share findings with stakeholders and other partners.

IV. Potential Challenges or Issues

DOH's APPLETREE program experiences significant staff turnover regularly. For example,

1. In April 2017, DOH hired a new community involvement coordinator.
2. In the second half of 2017, two health assessors moved to other DOH programs and the third moved to work on the APPLETREE program in another state.
3. The Principal Investigator retired on December 31, 2017.
4. New health assessors joined the team in October 2017, January 2018, and March 2018.
5. A new Principal Investigator joined the team in March 2018.

Evaluating program performance may be challenging for staff still learning the program.

V. Conclusions

DOH will collect outcome and performance measures and use the results to improve program quality.

Appendix I: Schematic Matrix of Florida Department of Health Measures

OUTCOME

- INCREASE AWARENESS
- INCREASE KNOWLEDGE
- CHANGE BEHAVIOR
- INCREASE ABILITY TO RESPOND

MEASURED INDICATOR/ OUTPUT

- A high % of CM understand the site-related health risks and ATSDRs recommenda-tions.
- Children are protected at ECE facilities.
- Develop skills needed to conduct health assessments and/or consultations.
- Environmental health be-havior changes among com-munity members.
- Individuals and groups are engaged significantly to pre-vent exposure.
- High % of people can pro-tect themselves.
- Communities are engaged in environmental health inves-tigations and activities.
- Regulatory agencies, policy makers, and individuals adopt and implement site-related recommendations.
- Exposures related to hazard-ous substances are reduced and prevented.
- Community capacity to re-spond to local environment health issues increases sig-nificantly.
- Protected from exposure at child care facilities to toxic chemicals at sites where the responsible party followed health recommendations .

INPUTS/ACTIVITIES

SURVEY
- Collect and Assess Survey Data

MTNC
Meeting-Training-Networking-Communication
- Identify and develop Partnerships
- Respond to calls and emails
- Provide Assistance.
- Provide Training.
- Participate in Training, workshops, meetings
- Provide workshops, meetings

P&R
Planning and Research
- Select policy and/or practice approach-es to address safe siting.
- Research possible data sources than can foster information needed to pro-tect human health.
- Access current risk siting and health landscape in Florida.
- Strategic planning.

LER
Lesson Learned-Evaluation-Reporting
- Annual reports.
- Assessment and Consultations, technical assistance.
- Estimate # of people protected from ex-posure
- Recommendation follow-up within 12 month
- Program evaluation and adjustment for feasibility, effectiveness

PERFORMANCE MEASURE

- FDOH survey
- ATSDR ACA survey
- Community update survey
- Tool for evaluating # and frequency of report accesses
- Attendance list
- Trainings log
- Recordings
- Emails
- Checklist
- Annual Report
- Health Educator Assessment Tool (HEAT)
- Graphical/statistical comparisons to per-vious years
- Cost-recovery log
- Project Tracking log
- Weekly status reports (in-house)
- Annual Reports

- 100% follow health recommendations
- # of CMs understanding pathways
- # of CM with exposure that may increase the potential for health effects
- # of survey participants
- 90% of CMs understand the health risk recommendations
- # of CMs understanding the risk
- % of CMs reporting to engage in behaviors to reduce exposure
- % of CM reporting an intent to engage in behavior to reduce exposure
- # of individuals attending open house meetings and/or workshops
- # of people outreached
- # of community participants
- # of phone calls responded
- # of emails responded
- # trainings classes/meetings/workshops hosted
- # trainings classes/meetings/workshops attended
- # of partnerships
- # of data sources
- # of risk siting and health landscapes in Florida
- # of recommendations provided
- # of recommendations implemented
- # of documents completed
- # of health investigations
- # of health outreach activities
- 70% of CMs changed their environmental behavior
- # of recommendations accepted
- # of people outreached
- Ideally, 100% of exposures related to haz-ardous substances are reduced or pre-vented
- # of turnaround time per call/ email/assessment
- Time window Phase I-III program imple-mentations

Call/Emails ≤ 2 days
Assessment ≤ 90 days
Consultation ≤ 30 days

LEGEND

ATSDR - Agency for Toxic Substances and Disease Registry
CM - Community Member
 # - number
% - percent

APPENDIX 3: FLORIDA'S CSPECE - PROXIMITY OF EARLY CARE AND EDUCATION FACILITIES TO AGRICULTURAL FIELDS AND POTENTIAL HEALTH RISKS

Division of Agricultural
Environmental Services
Bureau of Scientific Evaluation
and Technical Assistance
(850) 617-7917
(850) 617-7949 Fax

The Conner Building, No. 6
3125 Conner Boulevard
Tallahassee, Florida 32399-1650

Florida Department of Agriculture and Consumer Services
Commissioner Nicole "Nikki" Fried

CHOOSE SAFE PLACES PROGRAM

PROXIMITY OF EARLY CARE AND EDUCATION FACILITIES TO AGRICULTURAL FIELDS AND POTENTIAL HEALTH RISKS

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

DIVISION OF AGRICULTURAL ENVIRONMENTAL SERVICES

BUREAU OF SCIENTIFIC EVALUATION AND TECHNICAL ASSISTANCE

SCIENTIFIC EVALUATION SECTION

Paul Rygiel

04/01/19

Background

In late March, the Florida Department of Agriculture and Consumer Services (FDACS) Scientific Evaluation Section (SES) was contacted by the Florida Department of Health (FDOH) Hazardous Waste Site Health Risk Assessment Program in the Bureau of Environmental Health regarding the Choose Safe Places (CSP) program developed by the US Agency for Toxic Substances and Disease registry (ATSDR) under the CDC. Because Early Care and Education (ECE) facilities may be located near sites that use chemicals of potential human health concern, the CSP program was started to protect children and staff from these hazards (ATSDR, 2019). FDOH is implementing a CSP pilot program in Florida (FDOH, 2018) in which GIS tools will be used to map ECE facilities in relation to sites presenting potential human health risk. Databases of the Department of Environmental Protection and the Department of Children and Families are being used to facilitate the process. FDOH contacted FDACS about mapping agricultural sites and nearby ECE facilities for risk characterization. The following was requested:

1. Maps of Florida farms identifying the crops grown at each location
2. Reports on pesticides used for each crop

3. An FDACS recommendation of a person to serve in an advisory capacity on the CSP planning committee

Scope of Problem

With a growing recognition that children are often more vulnerable than adults to toxic hazards by virtue of their size, physiology, and behavior, in recent decades the US EPA has made great strides to protect them from harm, with implementation of the Food Quality Protection Act of 1996, the creation of the Office of Children's Health Protection in 1997, and by providing tools and guidance to help establish environmental health programs as detailed on their "Healthy Schools, Healthy Kids" website (Firestone et al., 2016; EPA, 2019a).

Pesticides may drift away from target sites on agricultural fields either during application, subsequently through volatilization, or via runoff during rain events. Drift and offsite migration of pesticides may occur because of unintentional spills or misapplications, but some small amount of loss even with proper application is unavoidable. The extent of offsite migration depends on the physical and chemical properties of the pesticides used and the environmental and climatological conditions at the time of application. Because of advances in analytical chemistry techniques, tiny quantities of some more volatile and persistent pesticides have been detected in air and other environmental media in remote parts of the world well removed from pesticide application sites (NPIC, 2014). However, even in areas of heavy agricultural use, air monitoring in Florida and elsewhere has typically shown pesticide levels in air that are well below levels of human health concern (FDACS, 2007; CDPR, 2015; WSDOH, 2009).

There appear to be very few reported adverse health incidents in the US related to pesticide drift at ECE facilities or schools, and nearly all cases have resulted in only minor health effects. Pesticides are applied at most ECE facilities and schools (EPA, 2019b), and exposure and illness involves pesticides applied at the ECE facility or school occurs more often than from pesticides drifting from nearby agricultural fields (UF IFAS, 2019; EPA, 2019c; Alarcon et al., 2005; Lee et al., 2011). Pesticide levels in ECE facilities are typically well below levels of concern, and comparable to levels found in schools and residences (Seltenrich, 2013). In Florida, despite hyperbolic claims by advocacy groups opposed to pesticides such as the Pesticide Action Network of North America, air monitoring by FDACS and other parties at the edge of agricultural fields and at schools has not shown pesticide levels to exceed levels of potential concern (FDACS, 2011; PANNA, 2008; FDACS, 2007).

Pesticide Use Tracking and Reporting Requirements

Characterizing the types of agricultural pesticides used at a given locale is not a straightforward matter, as each application changes depending on the crops being grown at a given time, the nature of pest pressure, the season, costs of various pesticides, and other factors. While

reporting all pesticides used on given crops at individual farms to a central repository like the California Pesticide Use Reporting System (CDPR, 2019) may offer some advantages, there are no such federal reporting requirements, and very few states have even considered implementing such programs because of the lack of needed infrastructure and the high cost relative to the benefit (Yanga et al., 2018; WSDOH, 2018; WPC, 2018). Growers in Florida do not have to report each use of all pesticides to any state agency, but they are required under Florida statutes (Chapter 487) to document restricted use pesticide applications by licensed and certified applicators and to make records available for agricultural inspectors and first responders should the need arise (FDACS, 2019a; FDACS, 2019b; FDACS, 2019c; UF IFAS, 2018; FDACS, 2008).

While agricultural pesticide use data on individual farms is unavailable to the general public, there are a few tracking systems that document use at the state and county level in Florida and other states. The NPIRS State Pesticide Information Retrieval System provides a database of pesticides and formulations that may be used in each state, in which data may be sorted by crop and other filters. While it is a subscription service, some data may be searched by the public free of charge (NSPIRS, 2019). The US Geological Survey maintains a public database of estimated agricultural pesticide use that provides maps, graphs, and tables (USGS, 2019). The US Department of Agriculture provides a Census of Agriculture, a complete count of US farms and ranches (USDA, 2019).

Pesticide Drift Exposure Mitigation Measures

In registering a new pesticide or an existing pesticide for a new use, the US EPA requires dozens of studies to characterize the full range of potential mammalian and ecotoxicological health effects in addition to environmental fate studies. In establishing the allowed use patterns on pesticide labels (which must be strictly followed by law), the Agency considers the most sensitive toxicological effect and then applies many uncertainty and safety factors in setting allowable exposure levels that are "reasonable certainty of no harm." This risk assessment process includes both aggregate and cumulative pesticide exposure and makes use of conservative reasonable worst-case scenarios in modeling potential exposure (EPA, 2018).

The US EPA does not generally require buffer zones between treated fields and "sensitive site" areas with bystanders such as schools and residences, except for the case of fumigants that are volatile, used at high application rates, and exhibit moderate to high toxicity. Likewise, Florida generally has few additional buffer zone requirements for the protection of human health, although for some pesticides FDACS has required the implementation of training, stewardship programs, and other mitigation beyond that required by the US EPA.

FDACS has evaluated the extent of pesticide drift and volatilization from agricultural fields in proximity to schools by conducting air monitoring in treated fields and by providing quantitative

human health risk assessments for the pesticide levels found in air. Our investigations have confirmed that exposure levels are expected to be below levels of potential health concern for children and adults at schools when pesticides are applied according to label directions as required by law.

The US EPA has given much consideration to potential adverse health effects from pesticide drift, and upon establishing a Spray Drift Task Force, an AgDRIFT model was developed to help estimate exposure from spray drift for individual pesticides. Further efforts are being implemented to reduce drift to schools and other areas where children may congregate through pesticide drift studies, improved label language and restrictions, use of spray drift reduction technologies, implementing best management practices, and applicator training (EPA, 2019d; EPA, 2013; NPIC, 2017; EPA, 2009). Additional tools have been provided by the EPA to assess children's pesticide exposure in residential settings through pathways other than air. These tools can also be applied to ECE facilities (EPA, 2012).

Resources are also available through the US EPA's Office of Children's Environmental Health and other EPA links (EPA, 2019e; EPA, 2019f, EPA, 2019g). The Pediatric Environmental Health Specialty Units, a network of experts in reproductive and children's environmental health, working in cooperation with the EPA and ATSDR, can provide medical information and other material that may be of use for the Florida pilot CDP program (PEHSU, 2019; PEHSU, 2016).

Good Neighbors Program

Florida has developed a Good Neighbors Program (GNP) through the University of Florida Institute of Food and Agricultural Sciences (UF IFAS) in cooperation with the Florida Department of Agriculture and Consumer Services (FDACS). The goal of GNP is to open communication between school personnel and nearby growers to avoid exposure of children and school staff to pesticide drift from treated fields (UF IFAS, 2019). As part of this program, FDACS has conducted air monitoring for pesticides on the edges of agricultural fields near schools (FDACS, 2011).

The GNP program director may be able to offer FDOH guidance and insight on parts of the initiative that may be applicable to the CSP program. Dr. Faith Oi, who is also the director of the Florida School IPM (Integrated Pest Management) Program at the University of Florida Department of Entomology and Nematology, can be contacted at 352-273-3971.

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