Statewide Plumbing and Mechanical Systems Inspections Study Report

Presented to the Iowa State Legislature
December 1st, 2010

Study and concluding report presented by:

Iowa Plumbing and Mechanical Systems Licensing Board
Iowa Electrical Examining Board
Iowa Association of Building Officials
Iowa Chapter of Int’l Association of Plumbing and Mechanical Officials
Executive Summary

In accordance with Chapter 151, Section 33 of the 2009 Iowa Acts, the Iowa Plumbing and Mechanical Systems Board, in conjunction with the Electrical Examining Board and city and county building officials, conducted a study to determine the most appropriate and feasible manner to implement a statewide inspection program for work performed by licensees of both boards.

The Inspection Study Committee provides this report to summarize the findings of its work along with the following recommendations for a statewide inspection program:

- A statewide inspection program is recommended to compliment the newly established statewide licensing program for plumbing and mechanical professionals.
- A statewide inspection program will provide Iowan’s greater assurance that the investments they make in their plumbing and mechanical systems in their homes and businesses meet minimum code requirements.
- A statewide inspection program for plumbing and mechanical systems should be separate and distinct from the electrical inspection programs due to the level of expertise needed for each discipline.
- A statewide plumbing code already exists, however a statewide mechanical code does not exist. The legislature should call for the adoption of a statewide mechanical code.
- Local jurisdictions should be allowed to continue to carry out inspections. Local jurisdictions should be included in the development of the statewide inspection program to ensure state and local inspection programs are closely aligned to minimize confusion for licensees working in multiple jurisdictions.
- A statewide inspection program should apply to an entire agricultural operation for the purposes of the state plumbing code, and a statewide inspection program should apply only to residential agricultural buildings for the purposes of a state mechanical code.
- A statewide inspection program should be initiated in two phases. Up to a two-year planning and development phase, and then an implementation phase to begin no later than the start of year three.
- The statewide inspection program should be fully self-supported through fees collected through permit and licensing fees. The cost of a statewide inspection program will be significant; however startup costs can be covered by licensing fees retained by the Plumbing and Mechanical Systems Board with no impact on the general fund.
Section 1 - Background

The 2007 Legislative Session brought the passage of legislation to create the Plumbing and Mechanical Systems Licensing Board (2007 Iowa Acts, Chapter 198) as well as the Electrical Examining Board (2007 Iowa Acts, Chapter 197). With the passage of the 2007 Iowa Acts Chapter 197, the Electrical Examining Board was directed to establish statewide inspections for work completed by the licensees of that board. In contrast, the Plumbing and Mechanical Systems Board was not granted the authority to create a statewide inspection program for the work conducted by its licensees. This discrepancy was not addressed again until the 2009 Legislative Session when discussion occurred among legislators about the need to create a statewide inspection program that covered the work performed by licensees of the Plumbing and Mechanical Systems Board. It was recognized that the possibility of duplication of efforts between inspection programs for each of the respective boards was an issue that needed further consideration and study before the legislature could act.

In accordance with Chapter 151, Section 33 of the 2009 Iowa Acts, the Iowa Plumbing and Mechanical Systems Board, in conjunction with the Electrical Examining Board and city and county building officials, conducted a study to determine the most appropriate and feasible manner to implement a statewide inspection program for work performed by licensees of both boards. The following pages summarize the methods and findings of the study, followed by recommendations for consideration by the legislature.

Section 2 - Inspection Study Committee

In response to the 2009 Iowa Acts, the Iowa Plumbing and Mechanical Systems Licensing Board (PMB) established an Inspection Study Committee. The board requested participation from the Iowa Dept of Public Health (IDPH) Electrical Examining Board (EEB), the Iowa Building Code Commissioner’s Office (BCC), the Iowa Association of Building Officials (IABO), and the Iowa Chapter of the International Association of Plumbing and Mechanical Officials (IAPMO). Each of these organizations nominated at least two individuals to serve on the Inspection Study Committee. Representation was as follows:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Representative</th>
<th>Jurisdiction</th>
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</thead>
<tbody>
<tr>
<td>PMB</td>
<td>Ron Masters</td>
<td>Chair (thru 4/2010)</td>
</tr>
<tr>
<td>PMB</td>
<td>Chuck Thomas</td>
<td>Secretary</td>
</tr>
<tr>
<td>PMB</td>
<td>Mick Gage</td>
<td>PMB Member</td>
</tr>
<tr>
<td>IDPH</td>
<td>Ken Sharp</td>
<td>Division Director</td>
</tr>
<tr>
<td>IDPH</td>
<td>Cynthia Houlson</td>
<td>PMB Executive</td>
</tr>
<tr>
<td>EEB</td>
<td>Barb Mentzer</td>
<td>Electrical Board Chair</td>
</tr>
<tr>
<td>EEB</td>
<td>Rod VanWart</td>
<td>Electrical Board Member</td>
</tr>
<tr>
<td>BCC</td>
<td>Stuart Crine</td>
<td>Building Code Commissioner</td>
</tr>
<tr>
<td>BCC</td>
<td>Pat Merrick</td>
<td>Chief Electrical Inspector</td>
</tr>
<tr>
<td>IABO</td>
<td>Cody Christensen</td>
<td>City of Des Moines</td>
</tr>
<tr>
<td>IABO</td>
<td>Roger Schemmel</td>
<td>City of Urbandale</td>
</tr>
<tr>
<td>IABO</td>
<td>Jeff Harden (alternate)</td>
<td>City of Altoona</td>
</tr>
<tr>
<td>IAPMO</td>
<td>Don Hansen</td>
<td>City of Des Moines</td>
</tr>
<tr>
<td>IAPMO</td>
<td>Bob Lynch</td>
<td>City of Cedar Rapids</td>
</tr>
<tr>
<td>IAPMO</td>
<td>Bill Schweitzer (alternate)</td>
<td>IAPMO</td>
</tr>
<tr>
<td>IAPMO</td>
<td>Mike Minnick (alternate)</td>
<td>City of Des Moines</td>
</tr>
</tbody>
</table>
In addition to the members named to the committee by each organization, the committee also held meetings with representatives of the Iowa Farm Bureau Federation as well as the Iowa League of Cities to discuss issues relevant to those organizations.

Section 3 - Importance of Inspections
Inspections of plumbing and mechanical systems help to ensure the safety, health, and quality of life of the public. Coupled with the requirements for licensure that focus on the skills and knowledge of plumbing and mechanical professionals, a statewide inspection program will result in a comprehensive plumbing and mechanical program for the state of Iowa.

Most people take for granted the benefits of a properly installed plumbing or mechanical system. But few people seldom consider the various components and issues involved in the proper installation of these systems and the impact it has on our health, safety, and comfort. An installation that is done poorly or that is non-code compliant can present serious risks to the occupants of that building. A quality inspection program will reduce the occurrence of non-code compliant installations. Common examples of problems associated with poorly installed systems include:

- Carbon monoxide poisonings or deaths that result from a heating system or water heater that is not properly ventilated.
- Water heaters that can explode and literally become a missile that launches through a home or business because the water heater was improperly installed.
- Contamination of a water supply becomes contaminated because of a cross connection between potable water and non-potable or other liquid contaminant created as a result of improper plumbing practices.
- Sewer gas odors entering a house that present a serious health risk to occupants because the plumbing system was not properly vented to allow sewer gases to escape to the outside.

Section 4 - Existing Infrastructure
There is no centralized location for information regarding how local jurisdictions in Iowa implement and manage their respective plumbing and mechanical inspection programs. In recognition of this limitation, the committee initiated a statewide survey of local building and inspection officials to gain a better understanding of current local inspection programs. The survey tool was created and managed by the Iowa Association of Building Officials with direct input and guidance from the Inspection Study Committee regarding the information being sought and the questions used in the survey.

The Survey was conducted in the summer of 2010. The survey was distributed to local jurisdictions across Iowa through professional organizations and resulted in responses from 40 local jurisdictions. The survey gained valuable information regarding demographics of local jurisdictions that administer permitting and inspection programs; permitting requirements, such as what kind of work requires a permit to be pulled; permit fees; inspection requirements, such as how many inspections, when they are done, etc.; staff information such as pay, education and training requirements, and workload capacity. A summary of these key items follows:
• The 40 local jurisdictions that responded issued an average of 20,634 permits each year. The population covered is approximately 700,000.
• Permits are issued for new construction and remodel projects on both residential and commercial sites, as well as for various component repair/replacement such as water heaters, duct work, gas supply lines, etc.
• The predominant way of charging a fee is using a calculated fee schedule based on fixture counts.
• Inspectors are expected to meet a minimum experience requirement and often are required to obtain inspector certification through either IAPMO or the International Code Council.
• Inspections are typically conducted within 24 hours upon request.
• Local jurisdiction permit fees for plumbing average $25 for a water heater replacement, $44 for a 800 ft.² basement finish with bath, $79 for a 600 ft.² residential room addition w/ one new full bath, $315 for a new 5,000 ft.² commercial building, $453 for a 2,000 ft.² new ranch home, and $770 for a new 12 unit apartment building.
• Local jurisdiction permit fees for mechanical permits average $35 for a 800 ft.² basement finish with bath, $72 for a 600 ft.² residential room addition w/ one new full bath, $300 for a new 5,000 ft.² commercial building, $150 for a 2,000 ft.² new ranch home, and $675 for a new 12 unit apartment building.

Section 5 - Considerations for Statewide Plumbing and Mechanical Inspections

A. Mechanical Code Adoption
The State of Iowa has not adopted a statewide Mechanical Code. Currently, the Iowa Dept of Public Safety, State Building Code Bureau has authority under Iowa Code 103A to adopt a Mechanical Code that is applicable only to State buildings and buildings constructed with state appropriated funds in areas without local building code enforcement. The lack of a statewide Mechanical Code creates challenges for adopting a statewide plumbing and mechanical inspection program. Without minimum construction standards for mechanical systems, there is not a minimum standard by which inspectors can reasonably enforce installation of mechanical systems. In order for an effective statewide inspection program to be implemented, the Inspection Study Committee recommends the adoption of a statewide mechanical code, but is not recommending whether the adoption authority remain with the Department of Public Safety or be transferred to the Plumbing and Mechanical Systems Licensing Board.

B. Local Inspection Authority
The Inspection Study Committee could not arrive at a consensus on how to incorporate local jurisdictions into a state-wide inspection program. The only sure agreement is that local jurisdictions should retain the authority to conduct inspections locally. The key challenges associated with the incorporation of local inspection authority are as follows:
• The Iowa Plumbing and Mechanical Systems Licensing Board is responsible for adopting the state plumbing code in Iowa. The Board has adopted the 2009 version of the Uniform Plumbing Code (2009 UPC) with amendments, found at 641IAC – Chapter 25. Local jurisdictions maintain home-rule authority under Iowa Code 364.3(3), and subsequently there are a number of local jurisdictions that have adopted the International Plumbing Code as part of their local building codes.
With two different codes adopted across jurisdictions within the State of Iowa licensees have expressed concern regarding the inconsistencies in which code requirements they are expected to meet when working from community to community. Furthermore, as of January 1, 2010 all plumbing and mechanical licensees must pass a Board approved exam. The exam for plumbing licensees is based on the State of Iowa Plumbing Code (2009 UPC) and for the mechanical licensees is based on the 2009 International Mechanical Code (2009 IMC); this raises additional concerns from licensees regarding the fact they are being tested over one code and are required to follow a different code in certain local jurisdictions.

If local jurisdictions are expected to adopt the State of Iowa Plumbing Code it will place a burden on local jurisdictions that currently adopt and enforce the International Plumbing Code (IPC). Concerns have been raised by these local jurisdictions that there will need to be considerable resources committed to make local rule changes, to re-train inspection staff on the 2009 UPC, and that their local contractors will also have to learn a new code. This is true with any new update to either the UPC or the IPC. Code updates occur on a 3 year cycle.

Because of the impasse, this report will outline the options that were considered with a brief explanation of pros and cons of each option:

**Option 1: Full adoption of the state-wide inspection program in local jurisdictions**

The leading argument for creating state-wide licensing requirements was to create a level playing field where all licensees were expected to meet the same requirements regardless of where in Iowa they worked. Under *Option 1* local jurisdictions would be required to align their local inspection programs so that every jurisdiction in Iowa is operating under the State of Iowa Plumbing Code and local jurisdictions would be required to align their employment requirements for inspectors with the state inspector positions. This transition would not be expected to occur over-night. Local jurisdictions would be given a grace period of up to five years from the start of a state-wide inspection program to make the transition.

**Pros:**
- Licensees operate under the same set of rules everywhere they work in Iowa reducing confusion on what code to comply with.
- The qualifications of inspectors will result in a more consistent application of the code.
- Local inspectors would be “grand-fathered” in and only newly employed staff would be required to meet the state-level qualifications.
- Local jurisdictions would be given 5 years to make transitions, during which time they will have had to make code modifications anyway.

**Cons:**
- Local jurisdictions will lose the tradition of “home rule”.
- There will be potential increases in staff salary due to the state level experience and education requirements for positions.
- Local jurisdictions operating under a code different than the State of Iowa Code will incur training expenses for inspectors to become proficient in the code.
- Local jurisdictions will need to make rule changes to align code, employment requirements, etc.

**Option 2: Allow local jurisdictions to operate independently under “home rule”**

As a home rule state, Iowa has a long tradition of recognizing the authority of local jurisdictions to create and enforce regulations that are no less stringent than State Law while at the same time giving that local jurisdiction the flexibility to address its specific needs.

**Pros:**
- No cost or impact to the local jurisdiction.

**Cons:**
- State of Iowa licensees will continue to face the challenges associated with complying with different rules for different jurisdictions.
- Inconsistencies will occur in the qualifications of inspection staff.

**Option 3: A hybrid of Option 1 and Option 2**

A final possibility is to consider a “middle ground” between Option 1 and Option 2. Finding middle ground will move the plumbing and mechanical industry towards a more consistent playing field, yet still address some of the concerns expressed by local jurisdictions. An example could be that upon implementation of a state-wide inspection program, local jurisdictions will be given a period of up to five years to transition to the State of Iowa Code, giving them almost two full code cycles to transition their rules as well as train local inspection staff on the State of Iowa Plumbing and Mechanical Code in effect at that time. On the other hand, local jurisdictions would be given flexibility to determine the qualifications needed for their inspection staff without the expectation that those inspectors would meet the state level requirements. Many local jurisdictions are small enough that they cannot justify having designated staff for each trade type, so there is a need for one inspector to cover all trades.

**Pros:**
- Option 3 moves the State in the right direction by more closely aligning the requirements of plumbing and mechanical professionals.
- Gives local jurisdictions ample time to plan and prepare for any modifications needed to align their local code with the applicable State Code.
- Gives local jurisdictions the flexibility to determine the appropriate qualifications for their inspection staff.
- Presents less of a burden on local jurisdictions.

**Cons:**
- Inconsistencies will remain on staff qualifications.
- Local jurisdictions will give up authority to independently adopt separate codes.
- Local jurisdiction will be burdened with aligning local codes with state codes, which may add additional rule changes or increase the amount of training needed by local inspectors.

**C. Merged vs. Separate Inspection Staff**

When the need for a statewide inspection program was raised during the 2009 legislative session, there was interest in simply adding additional inspectors to the existing statewide electrical...
inspection program and to train the electrical inspectors to conduct plumbing and mechanical system inspections. The Inspection Study Committee gave consideration to this concept in the interest of minimizing duplication of inspection services and to ensure the most efficient use of fees paid by licensees and the public. The following are the Pros and Cons that were considered as part of a combined statewide inspection program:

Pros:
- A potential cost savings in having potentially fewer inspectors.
- A potential cost savings in having fewer managerial/supervisor staff.
- A potential cost savings due to economies of scale.
- One point of contact for permit holders to contact for scheduling inspection purposes, etc.

Cons:
- Because state electrical inspection staff were hired as electricians, it would be difficult to train them to perform plumbing and/or mechanical inspections at the same level as they perform electrical inspections. State plumbing and mechanical inspectors should be held to the same level of expertise as electrical inspectors.
- Combining state electrical, plumbing, and mechanical inspections programs might not create significant efficiencies because the plumbing, mechanical, and electrical work can occur at different stages of construction.

After weighing the “pros” and “cons” of a merged inspection program, the Inspection Study Committee recommends that a separate inspection program for plumbing and mechanical systems with separate inspection staff be created.

D. Staffing needs
Based on patterns observed from the Department of Public Safety’s (DPS) electrical inspection program it is estimated that a statewide plumbing and mechanical inspection program will generate approximately 20,000 permits each year. Information obtained from the survey of local inspection programs indicates each permit generates a minimum average of 2 inspections for a minimum of 40,000 on-site inspections per year. Data from the local survey and the DPS also shows that inspectors average approximately 5 inspections per day over a year long period. Furthermore there is realistically 235 work days in a year per employee (52wks x 5days = 260 days/yr - 25days [5 weeks for vacation/holidays/sick leave] = 235 working days per inspector per year)

Using the figures of 40,000 inspections and 235 work days (40,000/235), results in an average of 170 inspections every work day. To cover this estimate of 170 inspections with an average of five inspections performed per day by each inspector (170/5), it is estimated a total of 34 inspectors will be needed to effectively conduct the minimum number of inspections needed for 20,000 permits.

State inspection staff should be well qualified to review and critique plans as well as adequately conducts inspection on job sites to ensure compliance with appropriate plumbing and mechanical codes. For this purpose, state inspection staff should be required to have a minimum of five years experience in the plumbing and/or mechanical trades. In addition, it is important to require
state inspectors be licensed via examination in the applicable trades. Obtaining a license through examination will demonstrate to the Iowa Department of Public Health, the Plumbing and Mechanical Licensing Board, as well as the licensees whose work is being inspected that the inspector has demonstrated they are knowledgeable in the trades. Finally, state inspection staff should obtain certification through an appropriate Code Council certification program for inspectors.

E. Budget
Implementing a statewide inspection will have significant start-up costs and long term operating costs. However, it is anticipated that the inspection program will not be a burden on the state budget. The Inspection Study Committee recommends the inspection program should be fully supported through permit fees paid by the users of the inspection program.

To estimate the cost of administering the program, key consideration was given to the following key components of operating an efficient and highly professional inspection program:

- Adequate # of inspectors is needed to ensure inspections are completed in a timely fashion.
- Inspection staff will be located in home/field offices to ensure the most efficient use of travel time to inspection sites.
- Inspection staff will be provided 4WD utility pick-ups to ensure accessibility to job sites, with appropriate equipment and safety gear. In addition, each inspector will be equipped with a cell phone, laptop, and air card for remote access to enter live data into the inspection software.
- Inspection staff will be expected to have at least 5 years of experience, and will possess or be expected to obtain industry certifications as an inspector within one year of employment.
- One supervisor and two administrative support staff will be needed to provide support to 34 inspection staff. Inspection staff leads will be assigned by regions of the state to assist the supervisor in management of workloads.
- Electronic permitting, inspection records, and reporting will be created. It is planned that this capacity will be added onto the existing Plumbing and Mechanical Professionals licensing software. There are no development costs, rather the software development and maintenance is supported through transaction fees paid by IDPH.
- IDPH charges an 8% administrative fee to all fee based programs to provide support for things such as managing time reporting, handling travel vouchers, expense claims, personnel matters, and overall management responsibilities.

A detailed estimated budget follows:

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<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel*</td>
<td>1 - Supervisor (PSE 3) @ $64,153</td>
<td>$1,822,866</td>
</tr>
<tr>
<td></td>
<td>1 – Admin Assistant (AA1) @ $35,258</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 – Clerk Specialist (Clerk Sp) @ $30,751</td>
<td></td>
</tr>
<tr>
<td></td>
<td>34 – Inspectors (Inspector) @ $49,786</td>
<td></td>
</tr>
<tr>
<td>Fringe</td>
<td>Personnel x 30%</td>
<td>$546,856</td>
</tr>
<tr>
<td>Travel</td>
<td>34 Inspectors X 235 days/yr x $14ave/day</td>
<td>$111,860</td>
</tr>
<tr>
<td>Vehicle</td>
<td>34 vehicles @ $20,000 fully equipped (start up cost only) 4 year replacement value $170,000/yr</td>
<td>$850,000</td>
</tr>
<tr>
<td>Fuel &amp; Veh Operation</td>
<td>25,000 miles/yr / 15mpg = 1,667gal/yr/vehicle x 34 vehicles = 56,678 gal x $2.70 = $153,030 Oil changes x 34 vehicles = 204 oil changes @ $25 = $5,100</td>
<td>$158,130</td>
</tr>
<tr>
<td>Staff Training</td>
<td>35 staff x $500/yr registration/training fees</td>
<td>$17,500</td>
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<td>Office Supplies/Equipment</td>
<td>35 laptops @ $1,000 35 Air cards @ $150 37 Office set-ups @ $4,000 37 staff @ $1,500/yr ave for general supplies 34 staff @ $500 for inspection equipment (tools, flashlight, safety gear, etc)</td>
<td>$260,750</td>
</tr>
<tr>
<td>Communications</td>
<td>37 staff x $4,000/yr (to include home office, air card, cell phone, etc.)</td>
<td>$148,000</td>
</tr>
<tr>
<td>Printing/Postage</td>
<td>To cover creating, printing, and mailing informational brochures re: inspections, routine mailing related to permits/inspections/etc.</td>
<td>$75,000</td>
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<tr>
<td>Information Technology costs</td>
<td>20,000 permits x $7 database admin fee 20,000 permits x $4 credit card/bank fee (ave) 100 hrs consulting/IT service x $100/hr</td>
<td>$230,000</td>
</tr>
<tr>
<td>Misc</td>
<td>37 staff x $750 annual DAS admin fees</td>
<td>$27,750</td>
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<tr>
<td>Admin support</td>
<td>8% of all expenditures</td>
<td>$339,897</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>$4,588,579</strong></td>
</tr>
</tbody>
</table>

1. Personnel is figured at 5-10% above base salary to start, annually thereafter an average 7% increase will occur to cover COLA and merit increase.
2. Travel is an estimated average of 50% of the daily per diem rate of $28/day.
3. It is estimated that on average vehicles will need to be replaced every 4 years, depending on rural vs. urban use, creating a need to budget annually approximately $110,000 to cover the four year replacement average.
4. Estimated budget total is based on estimated permit numbers, adjustments will be needed pending actual workload. Furthermore, the budget does not reflect inflation costs and other related cost adjustments for future years.

F. Permit/Inspection Fees
It is the recommendation of the Inspection Study Committee that the statewide inspection program operate on a fully fee supported basis. This may be a combination of permit fees as well as support from fees generated from the Plumbing and Mechanical Systems Licensing Board. Based on the estimated budget, and assuming 20,000 permits per year, the average permit will cost the State approximately $229.43. As was noted in Section 5 of this report, local jurisdiction permit fees are highly variable depending on the scope of the work being performed. It should also be noted that in most cases the permit fee includes the cost of the inspection, within reason. Some local jurisdictions do have a “call-back inspection” fee that can be charged in situations where the person performing the work is either not completing the work when they said it would be done, or the work is not code compliant after multiple visits by the inspector.
This additional fee is generally used only as a way to off-set disproportionate costs of having to make several visits to one job site.

After reviewing fee information from the survey results, the Inspection Study Committee recommends that fee schedules should not be set in code. Rather, the fee authority should remain in rule to enable the Plumbing and Mechanical Systems Board flexibility in adjusting fees appropriately up or down to better reflect the cost of administering the statewide inspection program. In addition, the Plumbing and Mechanical Systems Board will be better positioned to evaluate the permit fee charged to Iowans and may be able to offset the fee charged to Iowans with fees retained as part of the licensing program.

G. Applicability to Agricultural and Farmstead settings
The applicability of statewide inspections in agricultural settings was discussed with input from Iowa Farm Bureau Federation (IFBF). Because of a long standing history of exemptions for agricultural properties as it relates to certain state and local codes, it is no surprise that there is a difference of opinion on the issue of inspections for plumbing and mechanical systems on agricultural properties. The concerns raised by IFBF include:

- There is long standing precedent set for agricultural exemptions from certain state and local codes.
- Agricultural buildings and structures differ from commercial buildings and residential buildings in terms of use and construction so some of the design requirements of certain codes (especially mechanical codes) are not applicable to agricultural buildings.
- Iowa Code Chapter 105 already provides exemptions for property owners from licensing as long as they are working on their own property, it is IFBF’s opinion this exemption should also apply to inspection requirements.

The Inspection Study Committee agrees that agricultural buildings (non-human occupancy) are generally not considered to be covered by a mechanical code. However, the committee shares a different opinion than that of IFBF regarding the appropriateness of statewide inspections on agricultural properties. It is the committee’s opinion that the design and construction standards (and the need to verify those through an inspection program) should not differ based on whether a building is sitting on a 6,000 square foot lot in town vs. sitting on a 600 acre farm in rural Iowa. For example, agricultural practices include the use of a variety of farm chemicals that are mixed on the farmstead. In many areas of Iowa that farmstead is served by a rural water system that hundreds or perhaps thousands of other customers rely on for safe drinking water. Significant focus on backflow prevention is given in the State Plumbing Code, and to disregard the need to comply with such prevention measures presents a risk to rural water supplies if agricultural properties do not comply with the State Plumbing Code. There are real dangers associated with unsafe farm practices that could result in a garden hose drawing farm chemicals out of a mixing tank if a pressure loss on the water distribution system is experienced, that event could result in every customer of the water supply being exposed to a farm chemical through their drinking water. This same risk is also present for farm families that rely on private water wells for their water needs.

The committee recommends that a statewide inspection program should apply to an entire agricultural operation for the purposes of the state plumbing code, and a statewide inspection
program should apply only to residential agricultural buildings for the purposes of a state mechanical code.

**Implementation and Timing of a Statewide Inspection Program**

A key lesson learned by both the Plumbing and Mechanical Systems Licensing Board and the Electrical Examining Board is that implementation of statewide programs should not be rushed in a 6-12 month timeframe. Each board experienced significant challenges with implementing licensing and the Electrical Examining Board continues to experience challenges with statewide inspections because of short timelines in enabling legislation. The Inspection Study Committee recommends that the implementation of a statewide inspection program be implemented over a two-year phase in period. The first two years will be spent on activities such as creating a full set of rules that can be rolled out at one time, creating a new “Plumbing/Mechanical Inspector” job classification, building an online permitting and inspection database, and creating policies and procedure for implementing a program at the start of year three. Once implementation begins at the start of year three, local jurisdictions will be given 5 years to work towards compliance with the new statewide inspection program.

The two year development stage will be staffed by a combination of two new positions that can be rolled into the permanent staff needed at the start of implementation. One position will be an Executive Officer that can be transitioned into a Supervisory position, the second position will be an administrative support position. Implementing the statewide program after a two-year planning and development phase will give the Plumbing and Mechanical Systems Board, IDPH, licensees, local jurisdictions, and the public a much more systematic opportunity to understand and plan for the changes that will come with a statewide inspection program.

If implemented in this manner, fees currently retained from the Plumbing and Mechanical Systems Board’s licensing program can be used to cover the full cost of the program until such time that statewide permitting and inspections can occur. At that time, the permit fees generated will be established and coupled with licensing fees will create revenue sufficient to cover all operating costs of the statewide inspection program.