Department of Health and Human Services
Division of Licensing and Regulatory Services
11 State House Station, Augusta, ME 04333
Preliminary Analysis

**Date:** September 23, 2010

**Project**: Construct a New Inpatient Hospital in Augusta, Consolidate inpatient services, Convert the Thayer Campus into Outpatient Facility with "Free- standing" Emergency Department and related activity.

**Proposal by:** MaineGeneral Medical Center

**Prepared by:** Phyllis Powell, Assistant Director, Planning, Development and Quality
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**Directly Affected Party:** None

**Recommendation:** Approve with Conditions

| | **Proposed Per Applicant** | **Approved CON** |
|---|---|---|
| Estimated Capital Expenditure | $ 334,454,746 | $ TBD* |
| Maximum Contingency | $ 13,871,692 | $ TBD* |
| Total Capital Expenditure with Contingency | $ 348,326,438 | $ TBD* |
| Third Year Incremental Operating Costs | $ 41,727,257 | $ TBD* |
| Capital Investment Fund (CIF) Impact: | $ 21,017,186 | $ TBD* |

| | |
|---|---|
| Bureau of Insurance Regional Impact Estimate | 3.72 % |
| Bureau of Insurance Statewide Impact Estimate | 0.38 % |

*TBD: To be determined based upon discussions with the applicant prior to close of record.

# Introduction

On December 21, 2009, MaineGeneral Medical Center submitted a Certificate of Need (CON) application that proposed to construct a new hospital in Augusta, consolidate existing inpatient services from Waterville and Augusta into Augusta, consolidate Neonatal programs, develop Level II nursery care, maintain two Emergency Departments, one in Augusta and one "Free-standing ED" in Waterville, develop an Outpatient Surgery Center and other related activities and actions.

This Preliminary Analysis presents an abbreviated version of the comprehensive CONU staff analysis reports contained in Addendum A, which are incorporated herein by reference. It is organized according to the standards established by statute that must be met for the Commissioner to make a determination to grant a CON to an applicant.

CONU staff recommends that the Commissioner grant a CON, with conditions, to Maine General Hospital. CONU recommends that the Commissioner make the following findings:

**Section A-Fit, Willing and Able**

**CON Criteria: The applicant is fit, willing and able to provide the proposed services at the proper standard of care.**

The applicant is licensed by the State of Maine and accredited by the Joint Commission and other professional accrediting bodies. The applicant has demonstrated that it is capable of successfully managing a large construction project as evidenced by the Harold Alfond Cancer Center. The applicant also provided evidence that they are engaged in discussions with CMS and the State of Maine Division of Licensing and Regulatory Services relative to CMS guidelines for "Provider-based Off-campus Emergency Departments". This type of Emergency Department will occur in Waterville as a result of relocating inpatient services from Waterville to the new hospital in Augusta. It will be the first such "free-standing" ED in the State of Maine. In order for MGMC to be a licensed healthcare facility in Maine, the applicant must be in compliance with CMS standards.

CONU recommends the following conditions:

**Condition A-1***: The applicant must demonstrate compliance with the CMS hospital Conditions of Participation (CoPs ) and provider-based regulations at 42 CFR 413.65 or other regulations in force prior to operating the Waterville Emergency Department as a "Provider-based Off-campus Emergency Department".*

**Condition A-2***: The applicant will attain Joint Commission accreditation for the "Provider-based Off-campus ED" in Waterville by the end of the second full year of operation.*

**Section B-Financial Feasibility**

**CON Criteria: The economic feasibility of the proposed project is demonstrated in terms of the following:**

**1) The Capacity of the applicant to support the project financially over its useful life, in light of the rates the applicant expects to be able to charge for the services to be provided by the project.**

Total expenditures in this project exceed $428,500,000. Operating costs in the third year are expected to increase by $41,727,257. The applicant expects to contribute 8.2% ($35,000,000) in equity financing and fundraise an additional 9.3% ($40,000,000) towards this project, leaving 82.5% ($353,513,021) of this project to be financed from outside sources at 6% interest over 30 years.

Since the submission of the CON in December 2009, progress has been made on the fundraising assumptions. On May 7, 2010, the Harold Alfond Foundation announced that they will provide a grant of $25 million and match donations dollar for dollar up to an additional $10 million. MGMC will launch its capital campaign during the spring of 2011 and is confident that it will raise the $10 million required to receive the total match. The applicant will contribute $30 million in equity bringing the total equity contribution to $75 million. The proposed project financing and other projects undertaken by MGMC will add an estimated $310 million in liabilities to their long-term debt by 2018.

This project is described by the applicant as a consolidation. The State has a compelling interest in supporting consolidations that bring about increased efficiency within the health care system. Although this project is projected to save the hospital $7.1 million in operational expenditures, as proposed in the application it does not improve efficiency as a result of consolidated inpatient services.

According to the projections submitted by the applicant, this project will produce a more positive earnings margin than maintaining the current facilities. Earning margins will begin to decrease after 2015 if the current facilities are maintained. Once the first year of the project begins, operating margin does not improve and it worsens significantly in 2016 as compared to 2012. The reason for the decrease in profitability is that there are significant annual costs of this project, namely depreciation and interest. The expected growth in services provided is necessary for this project to achieve any level of profitability.

This project is a capital intensive project and will have a significant impact on the financial viability of the hospital. The profitability of this project is dependent on successful physician recruitment, generating more visits, generating more billings and engaging in more revenue-generating activity. The historic data presented by the applicant does not support the occupancy projections, which are at the higher end of the range of inpatients per population. There is a significant likelihood that the project will not achieve positive earnings if the projections are not accurate.

A large portion of the revenue increase is due to the increased number of physicians. The strategy for increasing staff seems to be dependent on the construction of the new hospital. The applicant included the following in their application:

"Table 3 summarizes the primary hospital-based and specialty care recruitment that will be enabled by the consolidation into a single inpatient hospital. To be conservative, the Financial Module assumed recruitment of 22 of the 30 planned physician additions."

**TABLE 3**

**MaineGeneral Planned Physician Recruitment (net)**
**Enabled by Consolidating from 2 to 1 Inpatient Settings**

| | | | | | |
|---|---|---|---|---|---|
| **Primary Care** | Family Practice | 13 | **Hospital-Based** | Emergency Medicine | 1 |
| | Internal Medicine | 1 | | Hospitalist Service | 4 |
| | Pediatrics | 2 | | Radiology | 0 |
| ***Primary Care Total*** | | **16** | ***Hospital-Based Total*** | | **5** |
| **Specialty Care - Medical** | Cardiology | 0 | **Specialty Care - Surgical** | Anesthesia | 1 |
| | Dermatology | 1 | | General Surgery/Vascular Surgery | 1 |
| | Gastroenterology | 1 | | OB/GYN | 2 |
| | Infectious Disease | 0 | | Ophthalmology | 0 |
| | Medical Oncology | 3 | | Oral Surgery | 0 |
| | Nephrology | 0 | | Orthopedics | 3 |
| | Neurology | 1 | | Otolaryngology | 1 |
| | Occupational Medicine | 0 | | Pathology | 1 |
| | Palliative/Hospice Care | 0 | | Plastic Surgery | 1 |
| | Physical Medicine/Rehabilitation | 0 | | Podiatry | 0 |
| | Psychiatry | 0 | | Thoracic Surgery | 1 |
| | Pulmonology | 0 | | Urology | 1 |
| | Radiation Oncology | 0 | | | |
| | Rheumatology | 1 | | | |
| ***Specialty Care - Medical Total*** | | **7** | ***Specialty Care - Surgical Total*** | | **12** |

The financial plan includes 22 of 30 planned recruitments while the referenced chart indicates 40 (16+7+5+12) recruitments as a result of consolidating inpatients. This discrepancy illustrates that there is a considerable degree of uncertainty about the varying outcomes possible from this project. There are significant financial risks to a project with large capital outlays which are dependent on increases in revenues to achieve profitability. This uncertainty concerning physician recruitment increases CONU's concerns with the financial feasibility of this project. *Condition B-1.*

A serious concern is the impact of optimistic projections for the additional project revenues. This project is expected to generate additional revenues to offset the costs of the project. The majority of additional costs to this project will be fixed costs resulting from depreciation and interest expenditures. The applicant has based its projections of future revenue increases upon the recruitment of additional physicians. If the projected revenue increases do not occur, the financial viability of the project may be threatened.

On the other hand, without this project MGMC forecasts a worsening operating loss through 2018. Operating margins are projected to decrease significantly from 2.53% in 2009 to -5.42% in 2018 if this project is not accomplished. The proposed project reduces the operating margin loss from -5.42% to -0.35% in 2018. MGMC forecasts a positive operating margin in 2020 if this project is approved. What the projections indicate is that additional projects may not be feasible during the first years of this project. This will affect the hospital's ability to react to unexpected situations that may arise.

MGMC currently has adequate liquidity, with a payment lag of 9 days between being paid and paying for services. The Maine median average was 8 days in 2008. The average payment period stays between 2 and 13 days throughout the projection. Both of these numbers represent significantly better cash management than the Maine Industrial average.

Days cash on hand was in a range of 90-110 days historically and is projected to increase significantly during the course of the project. Nationally, 2008 marked a steep decline of cash on hand. Hospitals with revenue of greater than $150 million have 89 days cash on hand. MGMC had net patient service revenue of $280 million and cash on hand of 110 days in 2008, which is above the average cash on hand for its peer group. The impact of the proposed project is calculated to be an increase of 95 days cash on hand in the third operating year. This is a significant increase in days cash on hand.

MGMC's debt service coverage (DSC) trend has been inconsistent for the last 4 years ranging from 2.27x to 6.38x. The trend, as projected by MGMC for the time frame of this project, 2010-2018, is that DSC is expected to decrease to 3.63x by 2018 without the project. The effect of the project is a decrease to 2.37x. This is not a significant decrease in DSC and is still adequate for MGMC to service its loans.

Total asset turnover (TAT) provides an index of the number of operating revenue dollars generated per dollar of asset investment. In 2008, MGMC had a TAT ratio of 0.94 times, which is indicative of the relative age of the hospital. By 2018, the significance of the investment from this project will indicate how much the capital nature of this project will weigh down the hospital. The investment should not be underestimated. MGMC must attain the projected levels of revenue in order for this project to be financially viable.

Projected demands on liquidity and capital structure are expected to be adequate to support operations. Due to the large scope of this project, financing and turnover ratios show a significant negative impact on the organization as a whole. These ratios are significantly lower because the project is capital intensive. The hospital has shown current earnings which are expected to be significantly impacted by this project; however, the project as proposed shows the hospital will remain profitable, if barely so. The limited profitability that the applicant projects for the three operating years, if continued into the future, could negatively impact the hospital's ability to react to future needs.

This project will have a significant impact on the costs of providing health care in the hospital service area. The costs per adjusted discharge per day (CPAD-D) are projected to increase by more than 4% annually. The applicant reports recent increases in the 3% range. The Bureau of Insurance reports on the potential impact of 3.72% to regional health insurance premiums for commercial providers. This is discussed further in Section E of the Staff Analysis contained in Addendum A.

CONU recommends the following conditions:

**Condition B-1:** *Upon approval of this CON and semi-annually until the third full fiscal year of the new hospital operation, MGMC will report, using forms approved by the Department, the results of physician recruitment compared to recruitment goals.*

**Condition B-2:** *Upon the approval of this CON and annually until the third full fiscal year of the new hospital operation, MGMC will not modify its existing free care policy except in response to the impact of health care reform.*

**1) The applicant's ability to establish and operate the project in accordance with existing and reasonably anticipated future changes in federal, state and local licensure and other applicable or potentially applicable rules.**

The department contacted the Centers for Medicare and Medicaid (CMS) regional office located in Boston, MA regarding the certification of emergency services at the "free-standing ED" proposed at Thayer. It was confirmed that the applicant is required to meet the CMS Conditions of Participation for hospitals. See condition Criteria A, *Condition 1*.

CONU staff is not aware of any other imminent or proposed changes in laws and regulations that would impact the project. It is currently unknown what impacts, if any, Health Care Reform will have on this project. MGMC presently has the organizational strength to adjust to reasonable changes in laws and regulations.

**Section C- Public Need**

**CON Criteria: The applicant has demonstrated that there is a public need for the proposed services as demonstrated by certain factors, including, but not limited to:**

**1) Whether, and the extent to which, the project will substantially address specific health problems as measured by health needs in the area to be served by the project.**

a) Emergency Departments (ED)

Presently, the Augusta ED has 23 patient rooms dedicated to ED use. Patient visits per Augusta ED room in FY 2009 were 1,434 (32,966 visits / 23 rooms). The new Augusta ED has a total of 27 proposed exam spaces in approximately 19,773 square feet. The applicant estimates 41,630 ED visits in Augusta for 2018. This would yield 1,541 (41,630 visits / 27 rooms) patients per ED room per year. According to the American College of Emergency Physicians, 1,212 to 1,600 annual visits per Emergency Department room is within the recommended range for an emergency room this size.

The Thayer Campus in Waterville currently has 22 ED rooms. Visits per Waterville ED room in FY 2009 were 1,464 (32,208 visits / 22 rooms). Once the new Augusta ED opens, the number of ED visits at the Waterville ED is expected to decrease. MGMC projects 958 (21,087 visits / 22 rooms) patients per room in 2018. This places the Thayer ED below the

recommended range of patients per ED room. According to the American College of Emergency Physicians, 1,154 to 1,500 annual visits per Emergency Department room is within the recommended range for an emergency room this size.

Future projections for Thayer are below the recommended range due to an expected shift of ED patients from Waterville to Augusta. According to the applicant, higher level acuity cases will shift to the new Augusta facility. It is difficult to speak with certainty about the numbers and patterns of the predicted shift but the estimates contained in the application appear reasonable based upon the information available.

The applicant provided extensive information specific to "Free-standing EDs".
The applicant has reviewed this topic from a national perspective and has gathered important insights through a site visit to a "free-standing ED" and through literature research.

CONU acknowledges that the Thayer ED is presently operating within a range recommended by the American College of Emergency Physicians. CONU also acknowledges that reduced ED utilization, as predicted for the Thayer ED, is a goal of the Maine State Health Plan. CONU's objective is to ensure that the configuration of ED facilities provides adequate accessibility as efficiently as possible. It is apparent that the Thayer ED plays an important role in the health care needs of the Waterville area. The size and scope of future ED services will depend upon a number of future events such as the success of the MGMC Medical Home model of care, the development of urgent care, reimbursement levels, patient choice and health care reform.

CONU is recommending the following condition:

**Condition C-1***: The applicant will demonstrate sufficient ED visits at both the Thayer and Augusta EDs to comply with the most recent guidelines published by the American College of Emergency Physicians. To support this demonstration, the applicant will provide quarterly utilization data for its emergency departments on forms approved by the Department. Failure by the applicant to demonstrate compliance with this range for four consecutive quarters will trigger a subsequent review following approval pursuant to 22 MRSA 332(1)*

<u>b) Inpatient beds</u>

MGMC's current licensed bed capacity is 287. The number of staffed beds is 226. The applicant is reducing the number of licensed from 287 to 226 and is replacing 226 beds in 73 semi-private and 80 private rooms with the same number of beds in 226 private rooms. The applicant indicates that the total number of staffed beds will not be reduced by this project.

As stated in The Health Care Advisory Board - Facility Innovation Brief in 2007 (on file with CONU) entitled "Hospital of the Future", investing in private rooms allows the potential for higher bed utilization. Hospitals can sustain a higher occupancy level with all-private rooms than with a mix of private and semi-private rooms. Based on that information, it appears that as many as 40 rooms could be eliminated from the plan and forecasted need for beds would still be met. The reduction of the inpatient services by 40 beds would increase effective bed occupancy to 87%. This effective bed occupancy is within the cited sources guidelines. The

plan for 142 Med/surgical beds in single rooms exceeds the need demonstrated by the projected occupancy.

The applicant designed the hospital to consider a 4-bed multiple for nurse staffing and 12-bed multiples for support space. The data provided by the applicant shows there is a wide variation in the population of med/surgical inpatients. For 91 days (24.93%) the daily census was less than 80 patients or between 39% and 56% occupied. Conversely, at other times of the year there were more than 99 patients for 52 days (14.25%). This would generate occupancy of between 70% and 78%. 20% of the days spent in the hospital occur with occupancy less than 56% and 17% of the days occur with occupancies greater than 70%. 62.5% of the days spent in the med/surgical units occur when the med/surgical unit is between 56% and 70% occupied.

The applicant projects that in 2018 there will be 32,596 admission days for med/surgical but also project that average length of stay will reach 4.28 instead of 4.11. This increase in projected average length of stay means that admission days are more likely 33,945. The impact is that 62% of the time the occupancy rate would be less than 60%; 62% of the time that occupancy rate would be 61% to 72%; and the remaining 17% of the time, occupancy rate would be 73% to 83%. The information clearly indicates that there is the potential for a significant underutilization problem with the proposed application.

During the period when the record was reopened, the applicant presented supplemental material to CONU relative to bed reduction for med/surgical capacity options for consideration. The options presented are a result of discussions between the applicant and the architect that designed the building.

One option presented is to reduce the med/surgical capacity by 10 beds for a total project savings of $1,166,480. The second option is to reduce the med/surgical beds by 34. This reduces the costs by $4,475,475. The applicant argues that “the future cost is more than double that of the savings that would be realized if the beds were eliminated from the project today”. CONU is cognizant of the fact that future construction is predictably more costly than present day construction; however, constructing excess capacity adds unnecessary costs to the health care system and the need for additional beds in the future is speculative.

CONU recommends the following conditions:

**Condition C-2***: The applicant shall reduce the med/surgical capacity by 34 beds to achieve the most recent range of efficiency recommended by the Health Care Advisory Board or other source acceptable to the Department and reduce the associated project costs.*

**Condition C-3***: The applicant will demonstrate sufficient inpatient bed stays per year at the new Augusta campus to attain effective occupancy according to the most recent guidelines published by the Health Care Advisory Board. The applicant will provide annual utilization data for its inpatient beds on forms approved by the Department. Failure by the applicant to demonstrate the required number of bed stays per year, for two consecutive years, will trigger a subsequent review following approval pursuant to 22 MRSA 332(1).*

c) Operating Rooms in North Augusta

The financial module contained in the application has a worksheet to review Operating Room (OR) construction projects. The applicant proposed two additional OR's at the new Augusta location but did not include sufficient supporting documentation for CONU to analyze the need for two additional ORs. Without historic and projected utilization data, CONU is unable to analyze the applicant's assumptions.

CONU recommends the following condition:

**Condition C-4***: The applicant must provide historic and projected utilization to demonstrate the need for two additional ORs at the new Augusta hospital.*

d) Outpatient facilities and major medical equipment

The applicant did not propose the reduction of capacity or equipment as a result of this project. The applicant proposes an additional CT machine; however, the application lacked sufficient information to validate the need for an additional CT.

CONU recommends the following condition.

**Condition C-5***: The applicant shall remove the new additional CT machine and associated costs from the proposed project.*

**2) Whether the project will have a positive impact on the health status indicators of the population to be served.**

The applicant's service area is divided into primary and secondary service areas. In 2005, MGMC commissioned the Public Health Research Group (PHRG) to conduct an independent Health Care Needs Study for the service area of Kennebec and Somerset counties. The 2005 PHRG Study pointed out that Somerset County residents were more likely to not have access to primary care physicians.

The 2005 PHRG Study suggested that Ambulatory Care Sensitive (ACS) Hospital Admission rates are sometimes used to approximate need. The ACS admission rate for patients aged 65+ was higher in Somerset County than in Kennebec County and in the State.

The 2005 PHRG Study indicated that primary care prevalence in Kennebec County appeared to be adequate; however, it called for more outpatient services for substance abuse problems as evidenced by a high substance abuse related hospital admission rate. Overall, the likelihood of co-occurring mental health and chronic disease diagnoses among residents in Kennebec and Somerset counties is greater than in the state overall.

CONU recommends the following condition.

**Condition C-6***: Upon the approval of this CON and annually for a 3-year period following the opening of the Augusta facility, the applicant will provide data and statistics regarding the project's impact on improving public health indicators on forms approved by the Department.*

**3) Whether the services affected by the project will be accessible to all residents of the area proposed to be served.**

MGMC's current free care policy guidelines exceed statute requirements. The applicant did not indicate whether their policy will remain the same throughout this project. As seen in the staff analysis, it appears that the applicant expects the volume of free care to decrease significantly as a percentage of care provided.

A concern for access includes transportation and roads. MGMC has arranged for transportation to and from the campus through KVCAP. MGMC is also engaged in discussions with the Maine DOT regarding redesigning the entrance and exit ramps for I-95. This will allow traffic to exit the highway and proceed directly to the new hospital. A factor for a CON approval is accessibility to services, in this case, road accessibility. The applicant has stated an anticipated estimated date of completion "in the fall of 2013 in advance of the new regional hospital opening." This is important to ensure adequate access to inpatient services.

CONU recommends the following condition:

**Condition C-7***: The applicant shall not close the inpatient services at their Waterville Thayer Campus prior to the completion of the interstate interchange.*

**4) Whether the project will provide demonstrable improvements in quality and outcome measures applicable to the services proposed in the project.**

MGMC is involved in several programs to improve quality of care. These efforts are ongoing in both the hospital and in the primary care practices. The applicant has a comprehensive plan to monitor and measure outcomes.

**Section D - Orderly and Economic Development**

**CON Criteria: The applicant has demonstrated that the proposed services are consistent with the orderly and economic development of health facilities and health resources for the State as demonstrated by:**

**5) The impact of the project on total health care expenditures after taking into account, to the extend practical, both the costs and benefits of the project and the competing demands in the local service area and statewide for available resources for health care.**

In 2009, the Maine Development Foundation conducted an economic analysis of the impact of this project on the economy of Central Maine (MDF Study). According to the MDF Study, in

2007 approximately $64 million in direct health care spending was lost by MGMC due to patients leaving the region to receive heath care services from other providers within the State of Maine. MGMC believes that this project will allow them to recruit and hire additional physicians and specialists, which will help the hospital recapture some of this $64 million. In the application, MGMC did not quantify how much of the $64 million per year they expect to recapture. When asked, by CONU and the Bureau of Insurance, to estimate how much of this they expect to recapture, the applicant said they could not do that because it was too "speculative".

If MGMC is successful at recapturing a material portion of the lost revenue, CONU believes there would be an accompanying decrease in revenues at other Maine hospitals if overall state healthcare expenditures are to remain constant. If in-state hospitals lose patients that originate from the MGMC service area and these facilities adapt by filling the idled capacity with other patients and services, total state healthcare expenditures will increase.

The applicant estimates annual savings as a result of this project through an increased operating efficiency of $7.1 million. MGMC estimates that because of increased operating efficiencies from operating one consolidated inpatient hospital, a net reduction of 104 FTE's is possible. In addition, the investments in green technology will lead to utilities conservation with an estimated $750,000 to $900,000 savings annually when compared to the existing facilities. The most significant costs to the project are increased depreciation and the incremental increase in interest expenditure on debt resulting from the construction of the proposed facility.

MGMC estimates that total debt service will increase from approximately $8 million in 2010 to approximately $25 million in 2018. The majority of this differential of approximately $17 million is not offset by the savings realized through increased operating efficiencies or green technology savings. This project will not create savings, but is predicted to increase costs and revenues to the hospital.

**6) The availability of State funds to cover any increase in state costs associated with utilization of the project's services.**

Total 3rd year incremental operating costs are projected by the applicant to be $41,727,257 and of that amount MaineCare's 3rd year cost is $6,380,098 ($41,727,257 x 15.29%) (MaineCare payor mix projected by the applicant for CON reviewable services only), which is both the Federal and State portions combined. The impact to the State portion of the budget by the third year of operation (2018) would be approximately $2,233,034 ($6,380,098 x 35%).

In the financial module completed by the applicant, the 2018 payor mix for Medicare is 31.05% of net charges received. The recent information shows a cost shifting from Medicare to private health insurance. If this outcome occurs, it could improve their financial position from the submission in the original CON application.

| MaineGeneral Medical Center | | | | |
|---|---|---|---|---|
| Net Patient Service Revenue | | | | |
| | | | | |
| | FY 2010 | FY 2016 | FY 2017 | FY 2018 |
| | | | | |
| Private Health Insurance | 49.88% | 50.89% | 51.07% | 51.24% |
| Medicare | 30.27% | 29.30% | 29.13% | 28.96% |
| MaineCare | 14.71% | 14.55% | 14.52% | 14.50% |
| Other | 5.14% | 5.26% | 5.28% | 5.30% |
| Total | 100.00% | 100.00% | 100.00% | 100.00% |

The revised table shows an increase in the percentage of patient service revenue derived from private health insurance and a decreasing percentage of patient service revenue derived from Medicare and MaineCare. As the population of MGMC's service area ages, a greater percentage of patients will be paying for their hospital services through Medicare. Reimbursement rates are typically higher for patients who use private insurance to cover their hospital services. In order for net patient service revenues to decrease for Medicare and remain relatively constant for MaineCare, the hospital would need to charge private health insurance companies a greater premium to attain the above percentages.

A small shift in payor mix away from private insurance to MaineCare and Medicaid would yield a significant negative impact on projected hospital revenue and the operating margin. The sensitivity to payor mix may have a material impact on MGMC future financial performance, depending on what the actual payor mix turns out to be.

**7) The likelihood that more effective, more accessible or less costly alternative technologies or methods of service delivery may become available.**

The cost of the proposed MGMC administrative and medical office space is estimated by CONU, based upon information provided by the applicant, to be approximately $731.13 per DGSF. The unadjusted Marshall & Swift standard for a medical office building is $198.50 per square foot and the applicant recently submitted proposal to build a medical office building at a cost of $150.12 per square foot. This comparison illustrates that medical office buildings are less costly to construct than medical facilities. Integrating the medical offices into the main hospital building increases the overall cost of the project as well as depreciation expenditures over the long-term.

CONU recommends the following condition:

**Condition D-1**: *The applicant shall reduce the cost of the administrative and medical office space to an amount agreed upon by the Department.*

**Section E- State Health Plan**

**CON Criteria: The applicant has demonstrated that the project is consistent with and furthers the goals of the State Health Plan.**

**1) The applicant is redirecting resources and focus toward population-based health and prevention.**

Maine CDC/DHHS Assessment

"The application proposes to adopt 'CDCs best practices for obesity reduction' to address the health needs of its service area. Specific initiatives relative to this priority are: 1) improve nutrition; and 2) invest in walking paths."

"For the first initiative (nutrition), MGMC is planning to incur an additional food cost of $95,000 annually to purchase local produce as well as "redeploy" an estimated $366,000 to develop intensive dietary counseling and support services for patients. As stated by the applicant, this demonstrates that this initiative is targeted primarily toward their patient base and not entirely population-based. Additionally, while this could result in a limited economic boost to local growers and redirect dietary consolidation personnel savings, it is just one piece of a comprehensive nutritional/obesity reduction strategy. A comprehensive population-based strategy for this initiative was not included in the application. The plan, as outlined in the application, does not demonstrate that it meets the criteria in the SHP of "population-based" because it focuses primarily on MGMC patients and staff instead of the service area population."

"For the second initiative (walking paths), MGMC will be investing $142,000 in walking trails and connecting paths at the new regional hospital. It will build on its previous investment in walking paths at the HACCC. This initiative will result in a combined two miles of paths on the medical campus. The application did not quantify the usage of the new paths or of the existing paths. There is no indication of whom and how many people will utilize the paths and what the outcome of that usage is/will be. MGMC did not state whether these paths would also be accessible during the winter months. Again, unless MGMC provides global community-based outreach, the paths are campus specific and readily accessible primarily to patients, visitors and staff."

"Relative to the cost of the project and to other recent CON applications, the proposed investment amount appears small."

"MGMC did not demonstrate their engagement with the local public health infrastructure in developing and implementing these initiatives. It would be helpful if there is a commitment stated to work collaboratively with the local public health infrastructure on developing the newly funded initiatives. That infrastructure would have been able to assist in moving the above initiatives to a true population-based strategy."

CONU Assessment

The total amount that MGMC is investing in the two initiatives is $603,000 out of a project that has $334,454,746 in CON reviewable costs. This is not a significant contribution of resources directed toward health and prevention. Additionally, these efforts are targeted primarily toward MGMC patients and staff and not the population of the service area in total.

**2) The applicant has a plan to reduce non-emergent ER use.**

Maine DHHS/CDC Assessment

"Under this priority, the applicant discussed three strategies for reducing non-emergent ED use including: (1) participation in state initiatives; (2) establish systems for monitoring and feedback; and (3) expand access."

"The application states that "for those physicians not employed by MGMC, many of the practices rely on the emergency department as their after hours and weekend back-up". The application does not discuss how these strategies will decrease utilization of the EDs by non-MGMC physician practices after hours and weekends. The applicant also did not discuss how the plan will impact patients that present themselves at the EDs who do not have a primary care provider. The applicant appears to be focused on the MGH patient population and not on the overall service area."

"As discussed by the applicant under the previous priority, MGH will invest $1,000,000 annually through their Advanced Medical Home Pilot, to enhance primary care recruitment, enhanced primary care compensation, primary nursing, IT and case management support to reduce ED and inpatient utilization. As a result of MGMC implementing their advanced medical home model, Noblis (Exhibit 8 of the application) forecasts a decrease of 4,493 ED visits at the Waterville Campus and 6,106 in Augusta in 2018. Additionally, 12,635 ED visits are projected to shift to Augusta by 2018."

"Although this applicant has presented a plan to reduce non-emergent ED use, Thayer ED will not be operating within the optimal ED visits per bed per year of 1,200-1,600 as recommended by the American College of Emergency Physicians. The 2018 projection for the Waterville ED is 958 visits per bed per year.

CONU Assessment

CONU concurs with the Maine DHHS/CDC Assessment.

**3) The applicant demonstrates a culture of patient safety, that it has a quality Improvement plan, uses evidence-based protocols, and/or has a public and/or patient safety improvement strategy for the project under consideration and for the other services throughout the hospital.**

Maine DHHS/CDC Assessment

"Although MGMC (applicant) is currently engaged in efforts to promote patient safety and evidence based protocols, the application did not demonstrate a linkage between the proposed project and a public and/or patient safety improvement strategy. There is no specific and quantifiable patient safety or quality improvement plan related directly to the project."

"Additionally, there are very unique issues raised by some of the changes planned for the utilization of the Thayer Campus such as an "off-campus, provider based" ED, a type of free-standing ED."

"Building a new inpatient facility with all private rooms was mentioned in other sections as a strategy to improve patient safety and the quality of the services received. It was not brought forward to this section and the effect on quality improvement and patient safety was not quantified nor a method of measurement demonstrated."

CONU Assessment

The applicant did not present quantifiable measurements for MGMC's culture of patient safety specific to this project. The applicant presents research studies and articles to support their presentation however did not present the connection the research has to this project. The applicant did not quantify the extent of existing "safety risks" to patients at MGMC and the projected safety goals to be realized by this project. The applicant did not discuss how they will measure these improvements.

There are several tables in the application particularly the tables presented in Attachment 26 – 2009 Board Quality Report, that demonstrate what MGMC is currently measuring and what their status is at this time. The relationship of these measurements to the project under review was not clearly demonstrated although considerable information was presented that discuss quality initiatives within MGMC. It is unlikely that these same initiatives will not apply to this project.

**4) The project leads to lower costs of care/increased efficiency through such approaches as collaboration consolidation, and/or other means.**

Maine DHHS/CDC Assessment

"The applicant's stated plan is to consolidate two inpatient hospitals into one. This goal is consistent with the SHP priorities. One physical plant for inpatient services should increase efficiencies and reduce duplication."

"This project reduces the number of licensed inpatient beds by 61, but maintains the same number of staffed beds. The application states that the project will contribute toward efficiencies because the consolidation allows a reduction in staff of 104 FTEs out of a current total of 2,167 FTEs (5% reduction). Cost savings resulting from the consolidation are projected to be $7.1 million."

"Additionally, the application on pg 57 states that the configuration of inpatient rooms in the new regional hospital will be arranged into "pods". This should lead to nursing efficiencies by placing the nurses' station closer to patient rooms resulting in shorter walking distances and increased accessibility to the patients. The plans also incorporate storage areas that are closer and more accessible to the units for the same purposes."

"The continued maintenance of two separate EDs and the resources that are needed to do so does not demonstrate a consolidation of those services. Operating two EDs will take two staff configurations, two physical plants and equipment duplication. There will also need to be additional on-call physicians to support both EDs."

"The applicant also proposes to consolidate some Waterville-based outpatient services to the Thayer Campus. This would eliminate the Seton Campus as well as some other buildings located in Waterville."

"While the applicant is consolidating some of its services, it appears that the overall impact of this project results in an increase in the cost of care instead of a decrease."

CONU Assessment

Elsewhere in this analysis, CONU discusses the bed efficiency ratio of the new hospital. There appears to be excess bed capacity that CONU has identified as the basis for Conditions 7 & 8. The BOI projects increased Statewide and Regional costs. CONU has considered both the costs and benefits of this project when developing conditions and making recommendations to the Commissioner.

**5) The project improves access to necessary services for the population.**

Maine DHHS/CDC Assessment

"The plan to improve access to necessary services for the population in the service area that was presented in this application is contingent on the recruitment and retention of primary care and specialist physicians. Presently, patients in the MGMC service area are receiving these services outside of this service area."

"The movement of inpatient services from Waterville to Augusta would decrease accessibility for some residents that utilize Waterville inpatient services now, especially those residing north or east of Waterville. The completion of the I-95 exit ramp will alleviate some concerns regarding access."

CONU Assessment

CONU concurs with the Maine CDC/DHHS assessment. Additionally, CONU is recommending a condition relative to the proposed highway exit that will facilitate access to the hospital.

CONU recommends the following condition:

**Condition E-1***: The consolidation of services between campuses proposed in this application will not occur until the highway exit ramp is completed.*

**6) The impact of the project on regional and statewide health insurance premiums, as determined by BOI, given the benefits of the project, as determined by CONU.**

Bureau of Insurance Assessment

On March 31, 2010 the Bureau of Insurance submitted the following assessment:

"The assessment compares the CON project's Year 3 incremental operating and capital costs per person (adjusted to the year ending December 31, 2010) to the estimated impact of the project on private health insurance premiums. Based on the assessment, I estimate that the maximum impact of this CON project on private health insurance premiums in MaineGeneral Medical Center's region for the project's third year of operation will be approximately 3.72% ($3.72 per $100) of premium. I further estimate that this project, in its third year of operation, will have an impact on statewide private health insurance premiums of approximately 0.38% ($0.38 per $100) of premium."

"The magnitude of the impact of this project on regional premiums is substantially greater than in previous CON project assessments performed by the Bureau of Insurance. This is due to the cost of this project relative to the privately insured population that the project will serve. Since the inception of the Superintendent's requirement to assess CON projects in 2003-4, there has been no CON project application of the magnitude of building a completely new community hospital facility with major renovations to an "off-campus" facility and the closing of two existing hospital facilities."

"In addition, this project may "re-capture" hospital services from surrounding community hospitals or the three tertiary hospitals in the state that may once have been performed at MaineGeneral Medical Center or its predecessor facilities but have, over time, increasingly been provided by other hospital facilities to MGMC's regional insured population. The financial information provided by the applicant did not appear to have taken this possibility into account. To the extent such service "re-capture" by MGMC occurs, the above-noted impact of this project on premiums in MGMC's region could be reduced, but there could be modest upward pressure on premiums in the several regions served by these other hospitals."

CONU Assessment

CONU concurs with the BOI assessment.

**7) Applicants (other than those already participating in the HealthInfoNet Pilot) who have employed or have concrete plans to employ electronic health information systems to enhance care quality and patient safety.**

Maine DHHS/CDC Assessment

"The applicant is part of health information exchange (HIE) and projects an expansion and enhancement of services in this area."

CONU Assessment

The applicant demonstrates an ongoing commitment to medical technology, although this is not a medical technology application.

**8) Projects done in consultation with a LEEDS certified-architect that incorporate "green" best practices in building construction, renovation and operation to minimize environmental impact both internally and externally.**

Maine DHHS/CDC Assessment

"MGMC's application specifies that they are utilizing LEEDS certified-architect and incorporating "green" best practices into this project. The applicant demonstrates an ongoing commitment to this priority as evidenced by the HACCC project that attained LEED silver certification status."

CONU Assessment

CONU concurs with the Maine CDC/DHHS assessment. The applicant has satisfied this priority.

**Section F - Outcomes and Impact**

**CON Criteria: The applicant has demonstrated that the project ensures high-quality outcomes and does not negatively affect the quality of care delivered by existing service providers.**

Quality Outcomes

This determination requires in-depth analysis and reporting of current measures of safety and high-quality outcomes and how the project will improve the quality of outcomes with measurable standards of care. The applicant proposes seven measurements that they assert meet the criteria that the project ensures high quality outcomes. Several of the measures contained in this section are also contained in other referenced sections of this application.

One of the measures proposed is the National Committee for Quality Assurance's (NCQA) Advanced Medical Home Pilot. The applicant is participating in this Advanced Medical Home Pilot. It is not clear to CONU whether this measure is dependent on, or a result of, this project.

Another initiative proposed by the applicant is related to Obesity. The applicant is proposing walking trails and a Farmer's Market to promote exercise and healthy eating habits. The current HACCC campus has walking trails and an active Farmer's Market that will be expanded as a result of this project. It appears that the Obesity Initiative has been developed without this project. This initiate is discussed further in Section VI, State Health Plan. The applicant did not present data demonstrating that these expansions would ensure quality outcomes as a result of this project.

The Maine Quality Forum stated that the Board of Trustees of MGMC receives regular reports on performance indicators of quality assurance. CONU was unable to determine what action the Board of Trustees takes relative to this reporting and how that impacts the quality of care. More specifically, the applicant did not specify what outcome improvements are expected as a result of this project.

Other activities are included that speak to input and output but lack measurable or quantifiable outcomes specific to this project. The Maine Quality Forum has stated that the project is a worthy project. CONU agrees with the Maine Quality Forum; however, the applicant must demonstrate measurable outcomes specific to this project.

The applicant has presented considerable information specific to the "Free-standing ED" and presents a clear understanding of the quality issues inherent in operating this type of service.

The applicant has not provided the CONU with examples of measurement standards to be employed to ensure high quality outcomes.

CONU recommends the following condition:

**Condition *F-1****: The applicant shall report baseline data and measurable improvements in quality outcomes as a result of this project annually for a period of three years from the opening of the new North Augusta Hospital.*

Impact on Quality of Care of other service providers

The applicant did not address how this project will affect the quality of care delivered by existing service providers. The applicant states they will "Create a more competitive model for physician recruitment thereby enabling recruitment targets previously discussed to be met." A discussion of the impact of this "competitive model for physician recruitment" could have addressed the impact of this activity on existing service providers in the MGMC primary and secondary service area but was not included.

**Section G - Service Utilization**

**CON Criteria: The project does not result in inappropriate increase in service utilization, according to the principles of evidence-based medicine adopted by the Maine Quality Forum.**

Maine Quality Forum Assessment

"This application was reviewed for health care quality considerations. The application differs from many in that it seeks to consolidate two acute care hospitals in two cities into a single 226 bed regional hospital. Therefore, assessment of the care quality implications of the project goes beyond the usual issues of technology assessment. In this review, attention was given to the proposed North Augusta inpatient facility rather than the proposed outpatient facility which would exist on the Thayer campus in Waterville. Three questions arise regarding care quality issues implicated in this project:

**1)** Are there quality concerns regarding the applicant?
**2)** Are quality matters given adequate consideration, when possible, in the design of the proposed facility?
**3)** Does the structure – both the design and the organization – of the proposed entity support the planned organizational aspects of a reformed health care system for the region?"

Applicant Quality

"For the four quarters ending March 31, 2009, Maine Quality Forum data would indicate that MaineGeneral Medical Center (MGMC) (including both Augusta and Waterville campuses) is an average performer in measures of pneumonia care, surgical care, and care processes relating to infection prevention (seehttp://www.mqf-online.com/summary/summary.aspx?ProvID=200015&level=0&CompGroup=All).
Of note, MGMC performance has improved over the previous measurement period in all measures. MGMC reported one central line associated bloodstream infection between April 1, 2007, and March 31, 2009. In a process of care measure indicating how often proven strategies were used to prevent central line infections, MGMC was in compliance over 99% of cases (424 of 428) observed. Similar performance was reported for compliance with a bundle of care processes used to prevent ventilator associated pneumonia (391/393)."

"Maine Quality Forum does not measure physician or physician practice performance. However, three of MGMC's primary care practices are participating in the selective Maine Patient-Centered Medical Home Pilot, and all have received NCQA Level 1 or higher medical home qualification. The Maine Health Management Coalition awarded a minimum of three green ribbons to each of the practices owned by MGMC (see http://www.mhmc.info/)."

"There is evidence in the application of administrative involvement in quality assurance and improvement, through reports to the Board of Trustees on a regular basis on these and other performance indicators."

Facility Design

"There are several ways in which the design, architecture, and structure of a hospital can affect patient outcomes. The field of "evidence-based design" is emerging to illuminate these issues.

Although the field of evidence-based hospital design is relatively new, the application reflects consideration of possible contributions to patient safety and recovery."

"Studies of evidence-based design (EBD) in hospital architecture are sometimes but not usually done to the standards of typical medical evidence. Randomization and clinical control are difficult to accomplish. However, there are some studies which help assess the value of certain design elements in quality improvement."

"The major body of evidence for the effect of design on patient outcomes is in the area of infection, arguably one of the most important targets for prevention. Design impacts airborne transmission of infection through ventilation and air filtration; person to person transmission of infection through accessibility of hand-washing facilities and selection of appropriate surface coverings; and water borne transmission through plumbing and fixture design. Single rooms, although more costly to construct and maintain, have both intuitive and measurable advantages, including infection prevention through "automatic" patient isolation, the ability to utilize vapor cleaning methods without evacuation of a second patient after a bed is vacated, elimination of the necessity to share toilets and bathrooms, and reduced visitor traffic from outside the hospital. Single rooms can be associated with reduction in medical errors and in patient falls."

"The advantages of other design elements are somewhat less clear and compelling, such as the effect of views of nature on speed of healing or the effect of natural light on staff performance. However, environmental factors and adjacencies are very likely to be related to performance and to patient satisfaction."

"The application reflects the applicant's attention to these and other design-related patient effects in the architecture and design of the proposed facility."

<u>CONU Assessment</u>

CONU concurs with the comments presented by the Maine Quality Forum

The application states that there will be a reduction in the number of licensed beds; however, the total number of existing staffed beds will remain the same. It was determined in Section C that at 72% projected efficiency, the new hospital, in its third year of operations, would be operating at a significantly low bed efficiency rate for a hospital with 100% private beds. This indicates that excessive capacity exists at this level. The proposed consolidation does not result in a cost effective, smaller, more efficient hospital and in fact, may result in inappropriate increases in service utilization. Conditions C-2 and C-3 are targeted at this excess capacity.

**Section - H Capital Investment Fund**

**CON Criteria: That the project can be funded within the Capital Investment Fund.**

CONU has determined that there are incremental operating costs to the healthcare system that are reflected in the CIF debit of $21,017,186. CIF dollars of $ 21,017,186 are available for implementing this project.

## I. Timely Notice

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| Letter of Intent | September 29, 2009 |
| Technical Assistance Meeting | October 29, 2009 |
| Application filed | December 21, 2009 |
| Application certified complete | December 21, 2009 |
| Public Informational Meeting/Public Hearing (Waterville) | January 20, 2010 |
| Public Informational Meeting/Public Hearing (Augusta) | January 21, 2010 |
| Record Closed | February 22, 2010 |
| Record Reopened | July 9, 2010 |
| Record Closed | September 7, 2010 |

## J. Recommendation.

For all the reasons contained in the preliminary analysis and in the record, CONU recommends that the Commissioner determine that this project should be approved with the conditions recommended in this preliminary analysis.