

**SEMINOLE COUNTY GOVERNMENT
AGENDA MEMORANDUM**

SUBJECT: EMS Matching Grant Application

DEPARTMENT: Public Safety *KMR* **DIVISION:** EMS/Fire/Rescue

AUTHORIZED BY: Kenneth M. Roberts **CONTACT:** Terry Schenk **EXT.** 5188

Agenda Date 12/9/03 **Regular** **Consent** **Work Session** **Briefing**
Public Hearing – 1:30 **Public Hearing – 7:00**

MOTION/RECOMMENDATION:

Approve and authorize Chairman to execute EMS Matching Grant Application.

BACKGROUND:

Seminole County EMS/Fire/Rescue proposes to upgrade 25 of its current Lifepack 12 monitor/defibrillators with the latest in end-tidal CO2 capnography detection equipment. It is felt that this upgrade will enable the paramedics to perform capnography (end-tidal CO2) testing on all intubated patients, ensuring correct endotracheal tube placement and the administration of proper levels of oxygen approaching the one hundred percent (100%) success rate, as mandated by the Medical Director.

The total cost of the equipment is \$80,250. The State grant will contribute \$60,187.50 (75% of total) and the County is responsible for \$20,062.50 (25% of the total). If awarded, grant funding will not be received until the fourth quarter of the 2003/04 budget year. Seminole County's portion will be funded from the EMS/Fire/Rescue Division's 2004/05 budget with funds designated for a spare LifePak 12 (\$25,000).

Reviewed by:
Co Atty: *[Signature]*
DFS: *[Signature]*
Other: _____
DCM: *[Signature]*
CM: *[Signature]*

File No. CPSF02

EMS MATCHING GRANT APPLICATION

FLORIDA DEPARTMENT OF HEALTH Bureau of Emergency Medical Services

Complete all items unless instructed differently within the application

Type of Grant Requested: Rural Matching

ID. Code (The State Bureau of EMS will assign the ID Code – leave this blank) _____

✓ 1. **Organization Name:** Seminole County Department of Public Safety: EMS/Fire/Rescue Division

✓ 2. **Grant Signer:** (The applicant signatory who has authority to sign contracts, grants, and other legal documents. This individual must also sign this application)

Name: Daryl G. McLain

Position Title: Chairman
Seminole County Board of County Commissioners

Address: 1101 East 1st Street

| | |
|----------------------------------|-----------------------------------|
| City: Sanford | County: Seminole |
| State: Florida | Zip Code: 32771 |
| Telephone: (407) 665-7209 | Fax Number: (407) 665-7958 |
| E-Mail Address: | |

✓ 3. **Contact Person:** (The individual with direct knowledge of the project on a day-to-day basis and responsibility for the implementation of the grant activities. This person may sign project reports and may request project changes. The signer and the contact person may be the same.)

Name: Terry Schenk

Position Title: Fire Chief
Seminole County EMS/Fire/Rescue

Address: 150 Bush Blvd.

| | |
|----------------------------------|-----------------------------------|
| City: Sanford | County: Seminole |
| State: Florida | Zip Code: 32773 |
| Telephone: (407) 665-5002 | Fax Number: (407) 665-5010 |
| E-mail Address: | |

✓4. **Legal Status of Applicant Organization (Check only one response):**

(1) Private Not for Profit [Attach documentation-501 (3) ©]
 (2) Private For Profit
 (3) City/Municipality/Town/Village
 (4) County
 (5) State
 (6) Other (specify): _____


✓5. **Federal Tax ID Number (Nine Digit Number).** VF_59740013K _____

✓6. **EMS License Number:** _2234_ **Type:** Transport Non-transport Both

✓7. **Number of permitted vehicles by type:** BLS _17_ ALS Transport _11_ ALS non-transport.

✓8. **Type of Service (check one):** Rescue Fire Third Service (County or City Government, nonfire) Air ambulance: Fixed wing Rotowing Both Other (specify)_____

✓9. **Medical Director of licensed EMS provider:** If this project is approved, I agree by signing below that I will affirm my authority and responsibility for the use of all medical equipment and/or the provision of all continuing EMS education in this project. **[No signature is needed if medical equipment and professional EMS education are not in this project.]**

✓Signature:  Date: 1/20/03

Print/Type: Name of Director ___Dr. Todd M. Husty_____

FL Med. Lic. No. _OS 4503_____

Note: All organizations that are not licensed EMS providers must obtain the signature of the medical director of the licensed EMS provider responsible for EMS services in their area of operation for projects that involve medical equipment and/or continuing EMS education.

If your activity is a research or evaluation project, omit items 10, 11, 12, 13, and skip to item Number 14. Otherwise, proceed to item 10 and the following items.

✓10. **Justification Summary:** Provide on no more than three one sided, double spaced pages a summary addressing this project, covering each topic listed below.

A) Problem description (Provide a narrative of the problem or need);
 B) Present situation (Describe how the situation is being handled now);
 C) The proposed solution (Present your proposed solution);
 D) Consequences if not funded (Explain what will happen if this project is not funded);
 E) The geographic area to be addressed (Provide a narrative description of the geographic area);
 F) The proposed time frames (Provide a list of the time frame(s) for completing this project);
 G) Data Sources (Provide a complete description of data source(s) you cite);
 H) Statement attesting that the proposal is not a duplication of a previous effort (State that this project doesn't duplicate what you've done on other grant projects under this grant program).

EMS MATCHING GRANT APPLICATION

10. Justification Summary:

A. Paramedics employed by the Seminole County Fire/Rescue Department have NO RELIABLE, QUALITATIVE method to accurately confirm the proper placement of an endotracheal tube (ET tube) during advanced airway management of Respiratory Compromised Patients. Seminole County Fire Department has identified a need for **upgrading** their current LIFEPAK 12 defibrillation equipment with the latest technology in end-tidal CO2 detection equipment (**Capnography**).

B. Presently, all Seminole County Fire Department Advanced Life Support units use the Medtronic Physio-Control LIFEPAK 12 monitor/defibrillator. As currently equipped, these monitor/defibrillators provide SaO2 / blood pressure monitoring, defibrillation, and 12-lead electrocardiogram analysis. The machine provides crucial information, helping the paramedics determine if a patient is suffering a heart attack and to defibrillate the patient before reaching the hospital. Unfortunately the machine is not being used to its full capability. Paramedics currently utilize only mechanical and quantitative procedures to attempt to verify proper ET tube placement during intubation procedures. Methods such as: vocal cord visualization, ventilation resistance, visualizing chest rise and fall, auscultating lung sounds, patient color improvement, SaO2 documentation, colorimetry, and ET tube condensation are presently utilized to predict proper tube placement. Using these methods to confirm proper tube placement has still resulted in **ONLY** a seventy-six percent (76%) success rate in ET intubations performed by Seminole County Fire Department paramedics.

- C. Seminole County Fire Department proposes to upgrade 25 of its current LIFEPAK 12 monitor/defibrillators with the latest in end-tidal CO2 capnography detection equipment. In addition to the equipment upgrades, complete training on the use of this important medical technology will be provided to all EMS personnel. It is felt that this upgrade will enable the paramedics to perform capnography (end-tidal CO2) testing on ALL intubated patients, ensuring correct endotracheal tube placement and the administration of proper levels of oxygen approaching the one hundred percent (100%) success rate as mandated by the Medical Director**
- D. Consequences from this EMS Matching Grant not being granted: the ability to confirm successful placement of an endotracheal tube in an intubated patient would remain unchanged. Paramedics would continue to use manual, mechanical and colorimetry methods to determine whether or not they have successfully intubated a patient. While these primary methods of confirmation are adequate measures for initial success estimates, providing continual readings of end-tidal carbon dioxide detection supports capnography as the most effective method of confirming that patients have been initially intubated correctly and STAY intubated throughout the transport to the medical facility.**
- E. Seminole County, located in Central Florida, covers an area of approximately 300 square miles, with a population of over 350,000 residents. Within its boundaries run several major roadways and highways. Both commercial and multi-family residential business call Seminole County home. Orlando Sanford International Airport and the**

Amtrak Autotrain are major contributors to the economic and financial stability of Seminole County. Tourism and the large number of retirees living in Seminole County also contribute to the demographic makeup of the area.

- F.** The time period to complete this project would fall well within the one year time frame. Major components of the project include the issuing of the purchase order for the twenty-five (25) capnography modules and their respective installation in the current defibrillator/monitors. Once the purchase order has been issued, Medtronic Physio-Control representatives advise that the entire installation and upgrading process can be completed within three (3) months.
- G.** Several data sources including, the American Heart Association, American College of Emergency Physicians, and Medtronic/Physio-Control were used to assist in the completion of this grant request. Also utilized were monthly, quarterly and annual Medical Quality Assurance statistical data associated with the aggregate data on the success rate of endotracheal intubation. This data was generated from all patient medical reports where the patient required endotracheal intubation, regardless of the reason for the intubation attempt (medical or traumatic).
- H.** This EMS Grant Application is an original project request, and does not duplicate or provide continuance to any other grant project or projects under this grant program.

Next, only complete one of the following: Items 11, 12, or 13. Read all three and then select and complete the one that pertains the most to the preceding Justification Summary.

✓ 11. Outcome For Projects That Provide or Effect Direct Services To Emergency Victims: This may include vehicles, medical and rescue equipment, communications, navigation, dispatch, and all other things that impact upon on-site treatment, rescue, and benefit of emergency victims at the emergency scene. Use no more than two additional one sided, double-spaced pages for your response. Include the following.

- A) Quantify what the situation has been in the most recent 12 months for which you have data (include the dates). The strongest data will include numbers of deaths and injuries during this time.
- B) In the 12 months after this project's resources are on-line, estimate what the numbers you provided under the preceding "(A)" should become.
- C) Justify and explain how you derived the numbers in (A) and (B), above.
- D) What other outcome of this project do you expect? Be quantitative and explain the derivation of your figures.
- E) How does this integrate into your agency's five year plan?

~~12. Outcome For Training Projects: This includes training of all types for the public, first responders, law enforcement personnel, EMS and other healthcare staff. Use no more than two additional one sided, double-spaced pages for your response. Include the following:~~

- ~~A) How many people received the training this project proposes in the most recent 12 month time period for which you have data (include the dates).~~
- ~~B) How many people do you estimate will successfully complete this training in the 12 months after training begins?~~
- ~~C) If this training is designed to have an impact on injuries, deaths, or other emergency victim data, provide the impact data for the 12 months before the training and project what the data should be in the 12 months after the training.~~
- ~~D) Explain the derivation of all figures.~~
- ~~E) How does this integrate into your agency's five year plan?~~

~~13. Outcome For Other Projects: This includes quality assurance, management, administrative, and other. Provide numeric data in your responses, if possible, that bear directly upon the project and emergency victim deaths, injuries, and/or other data. Use no more than two additional one sided, double-spaced pages for your response. Include the following.~~

- ~~A) What has the situation been in the most recent 12 months for which you have data (include the dates)?~~
- ~~B) What will the situation be in the 12 months after the project services are on-line?~~
- ~~C) Explain the derivation of all numbers.~~
- ~~D) How does this integrate into your agency's five year plan?~~

EMS MATCHING GRANT APPLICATION

11. Outcome For Projects That Provide or Effect Direct Services to Emergency Victims:

- A. Historical data for this project was compiled from electronic Patient Care Reports (PCR) completed by Seminole County Fire Department Paramedics. These reports were documented for patients treated by SCFD during the time period of October 1, 2002 thru October 31, 2003. Statistical data indicates that Seminole Co. Paramedics have been successful on seventy-six percent (76%) of their endotracheal intubation attempts. However, and **unfortunately**, the data further indicates that of this 76% success rate, **only twenty-six percent (26%) of the successful intubations were achieved on the FIRST attempt**. The new and upgraded capnography technology is slated to improve both statistics.
- B. After the installation of the capnography module upgrades on the LIFEPAK 12 equipment, close attention and Medical Quality Assurance observation will be directed to the “number of attempts / success rate” of all endotracheal intubations initiated by department Paramedics. With initial capnography training and gaining valuable experience in its use, it is expected that the success rate will approach the ninety-five to one hundred percent (95% - 100%) range as directed by the Seminole County Medical Director and wished for by hospital doctors.
- C. As disclosed in “A” above, the endotracheal intubation data was derived from cumulative Medical Quality Assurance (MQA) statistics as mandated by the Seminole County Medical Director. Invasive ALS procedures such as ET

intubation are continuously monitored, interpreted, and tweaked as needed, to provide the highest level of accuracy and success that can be achieved.

Future predictions for successful intubation rates have been derived from meetings held between the Seminole County Medical Director and the respective EMS chief officers of the other jurisdictions within the “First Response System.”

Nationally recognized successful intubation rates were also taken into consideration when setting the high expectations for Seminole County Fire Department and “First Response System” ALS providers to strive for.

- D.** Not only do we wish to considerably increase the success rate of our intubation attempts, but also to decrease the number of attempts it takes to successfully insert an endotracheal tube. Quality Assurance benchmarks have been set to strive for a ninety-five percent (95%) success rate on “First Time Intubation Attempts.”

Capnography is the vehicle that will allow us the ability to qualitatively determine proper ET tube placement and measure a patient’s carbon dioxide (CO₂) levels, not only on initial intubation, but also on a continuous, uninterrupted basis during pre-hospital treatment, transport, and after arrival at the hospital.

- E.** With capnography quickly becoming the national standard of care among EMS providers across the country, the Seminole County EMS System has also committed to upgrading to this benchmark technology. County-wide medical protocols have been updated to immediately require the use of the capnography technology as older electrocardiogram equipment is upgraded and/or new ECG equipment and accessories are purchased to replace older, less reliable and efficient cardiac monitoring technology.

Skip Item 14 and go to Item 15, unless your project is research and evaluation and you have not completed the preceding Justification Summary and one outcome item.

14. Research and Evaluation Justification Summary, and Outcome: You may use no more than ~~three~~ additional one sided, double spaced pages for this item.

- A) Justify the need for this project as it relates to EMS.
- B) Identify (1) location and (2) population to which this research ~~pertains~~
- C) Among population identified in 14(B) above, ~~specify a past time frame~~, and provide the number of deaths, injuries, or other adverse conditions during ~~this time that you estimate the practical application of this research will reduce (or positive effect that it will increase).~~
- D) (1) Provide the expected ~~numeric change when the anticipated~~ findings of this project are placed into practical use.
(2) Explain the basis for your ~~estimates~~
- E) State your hypothesis.
- F) Provide the method and ~~design~~ for this project.
- G) Attach ~~any questionnaires~~ or involved documents that will be used.
- H) If ~~human or other living~~ subjects are involved in this research, provide documentation that you will ~~comply with~~ all applicable federal and state laws regarding research subjects.
- I) Describe how you will collect and analyze the data.

15. Statutory Considerations and Criteria: The following are based on s. 401.113(2)(b) and 401.117, F.S. Use no more than one additional double spaced page to complete this item. Write N/A for those things in this section that do not pertain to this project. Respond to all others.

Justify that this project will:

- A) Serve the requirements of the population upon which it will impact.
- B) Enable emergency vehicles and their staff to conform to state standards established by law or rule of the department.
- C) Enable the vehicles of your organization to contain at least the minimum equipment and supplies as required by law, rule or regulation of the department.
- D) Enable the vehicles of your organization to have, at a minimum, a direct communications linkup with the operating base and hospital designated as the primary receiving facility.
- E) Enable your organization to improve or expand the provision of:
 - 1) EMS services on a county, multi county, or area wide basis.
 - 2) Single EMS provider or coordinated methods of delivering services.
 - 3) Coordination of all EMS communication links, with police, fire, emergency vehicles, and other related services.

EMS MATCHING GRANT APPLICATION

15. Statutory Considerations and Criteria:

- A.** The Seminole County Fire Department hereby acknowledges that this project, if successfully funded, will be made available to all residents, guests, and any other citizen who made need the services of the specialized equipment. This assurance is made to all citizens of Seminole County, including the six (6) municipal jurisdictions, should the need arise. As a participant in the Seminole County “First Response System,” the Seminole County Fire Department is compelled and obligated to provide this much needed technology to the other EMS providers and members of the EMS system who operate under the license of one Medical Director.
- B.** This project will exceed State and Medical Director ECG minimum standards.
- C.** This project will exceed State and Medical Director ECG minimum standards.
- D.** N/A
- E.**
- 1.** With the successful completion of the project, the service to all emergency agencies in the County, multi-county, and Central Florida area will be greatly improved and enhanced. All agencies will be able to count on this technology being used on their respective citizens and residents should SCFD respond.
 - 2.** Without a doubt, the ALS services provided by the Seminole County Fire Department, when it is the sole responder to an EMS call, will be enhanced and much improved with the addition of this medical technology. Patients suffering cardiac and respiratory system abnormalities will be significantly impacted for the better.
 - 3.** N/A

16. Work activities and time frames: Indicate the major activities for completing the project (use only the space provided). Be reasonable, most projects cannot be completed in less than six months and if it is a communications project, it will take about a year. Also, if you are purchasing certain makes of ambulances, it takes at least nine months for them to be delivered after the bid is let.

| Work Activity | Number of Months After Grant Starts | |
|--|-------------------------------------|------------|
| | Begin | End |
| Prepare Capnography upgrade equipment Purchase Order (PO) for final approval by County Commission. | 5 months after grant award | |
| Send Purchase Order to Medtronic/Physio-Control for Capnography upgrade equipment... | 1.5 months after grant award | 2.0 months |
| Medtronic/Physio-Control Regional Technical Services Representative installs Capnography upgrade equipment in all LIFEPAK 12 monitors. | 2.0 months after grant award | 3.0 months |
| Capnography upgrade equipment training from Medtronic/Physio-Control representatives... | 3.0 months after grant award | 5.0 months |
| | | |

17. County Governments: If this application is being submitted by a county agency, describe in the space below why this request cannot be paid for out of funds awarded under the state EMS county grant program. Include in the explanation why any unspent county grant funds, which are now in your county accounts, cannot be allocated in whole or part for the costs herein.

The Seminole County EMS System (First Response System) is comprised of six(6) city jurisdictions, the Orlando Sanford International Airport and the Seminole County EMS/Fire/Rescue Division itself. The monies received under the annual EMS County Grant program is placed in an EMS Trust Fund to be used for projects, equipment, training/educational programs, adjuncts, etc. that benefit all jurisdictions. The approval for spending these dollars rests with the Seminole County Executive Group, which is comprised of the Fire Chiefs from the respective "System" members. Current EMS county grant/trust fund monies are already budgeted for equipment and projects as directed by the Executive Group. Projects associated with Mobile Data Terminals for rescue vehicles, Human Patient Simulation (Sim Baby), WMD interactive teaching and simulation equipment and training, Medical Quality Assurance equipment, personnel, software and training are but a few of the projects currently being successfully completed and/or planned with the EMS county grant funding. These projects are the result of mutual planning and resource sharing between ALL members of the Seminole County EMS First Response System

✓ 18. Budget:

| Salaries and Benefits: For each position title, provide the amount of salary per hour, FICA per hour, fringe benefits, and the total number of hours. | Costs | Justification: Provide a brief justification why each of the positions and the numbers of hours are necessary for this project. |
|--|--------------|--|
| ✓ No Salaries and/or Benefits will be needed for this project. Grant will be processed and completed using normal staff personnel working normal assigned weekly hours... | | |
| TOTAL: | N/A | |

| Expenses: These are travel costs and the usual, ordinary, and incidental expenditures by an agency, such as, commodities and supplies of a consumable nature, <u>excluding</u> expenditures classified as operating capital outlay (see next category). | Costs: List the price and source(s) of the price identified. | Justification: Justify why each of the expense items and quantities are necessary to this project. |
|--|---|---|
| ✓ Disposable Filterline CO2 Airway adapters for Adult/Pediatric intubation tubes. 25 boxes of 25 adapters... | \$215.00 per box – price quote from Medtronic/Physio-Control... | Needed equipment for monitoring end-tidal CO2 levels in the exhaled air of intubated patients... |
| | | |
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| | | |
| TOTAL: | \$ 5,375.00 | |

| Vehicles, equipment, and other operating capital outlay means equipment, fixtures, and other tangible personal property of a non consumable and non expendable nature, <u>and</u> the normal expected life of which is 1 year or more. | Costs: List the price of the item and the source(s) used to identify the price. | Justification: State why each of the items and quantities listed is a necessary component of this project. |
|---|--|---|
| | | |
| ✓ End-Tidal CO2 detection module for upgrading LIFEPAK 12 | \$2995.00 per unit -- price quote per Medtronic/Physio-Control... | Needed equipment for monitoring end-tidal CO2 levels in the exhaled air of intubated patients... |
| Monitor/defibrillator. <u>25 units</u> to be purchased with grant for upgrading current department equipment... | | |
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| | | |
| TOTAL: | \$ 74,875.00 | |

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|--|---------------------|--|
| State Amount (Check applicable program) | | |
| <input checked="" type="checkbox"/> Matching: 75 Percent | \$ <u>60,187.50</u> | |
| <input type="checkbox"/> Rural: 90 Percent | \$ _____ | |
| Local Match Amount (Check applicable program) | | |
| <input checked="" type="checkbox"/> Matching: 25 Percent | \$ <u>20,062.50</u> | |
| <input type="checkbox"/> Rural: 10 Percent | \$ _____ | |
| Grand Total | \$ <u>80,250.00</u> | |

DH Form 1767, Rev. 2002

19. Certification:

My signature below certifies the following.

I am aware that any omissions, falsifications, misstatements, or misrepresentations in this application may disqualify me for this grant and, if funded, may be grounds for termination at a later date. I understand that any information I give may be investigated as allowed by law. I certify that to the best of my knowledge and belief all of the statements contained herein and on any attachments are true, correct, complete, and made in good faith.

I agree that any and all information submitted in this application will become a public document pursuant to Section 119.07, F.S. when received by the Florida Bureau of EMS. This includes material which the applicant might consider to be confidential or a trade secret. Any claim of confidentiality is waived by the applicant upon submission of this application pursuant to Section 119.07, F.S., effective after opening by the Florida Bureau of EMS.

I accept that in the best interests of the State, the Florida Bureau of EMS reserves the right to reject or revise any and all grant proposals or waive any minor irregularity or technicality in proposals received, and can exercise that right.

I, the undersigned, understand and accept that the Notice of Matching Grant Awards will be advertised in the *Florida Administrative Weekly*, and that 21 days after this advertisement is published I waive any right to challenge or protest the awards pursuant to Chapter 120, F.S.

I certify that the cash match will be expended between the beginning and ending dates of the grant and will be used in strict accordance with the content of the application and approved budget for the activities identified. In addition, the budget shall not exceed the department, approved funds for those activities identified in the notification letter. No funds count towards satisfying this grant if the funds were also used to satisfy a matching requirement of another state grant. All cash, salaries, fringe benefits, expenses, equipment, and other expenses as listed in this application shall be committed and used for the activities approved as a part of this grant.

Acceptance of Terms and Conditions: If awarded a grant, I certify that I will comply with all of the above and also accept the attached grant terms and conditions and acknowledge this by signing below.

Signature of Authorized Grant Signer
(Individual Identified in Item 2)

____ / ____ / ____
MM / DD / YY

**FLORIDA DEPARTMENT OF HEALTH
EMS GRANT PROGRAM**

REQUEST FOR GRANT FUND DISTRIBUTION

In accordance with the provisions of Section 401.113(2)(b), F. S., the undersigned hereby requests an EMS grant fund distribution for the improvement and expansion or continuation of pre-hospital EMS.

DOH Remit Payment To:

Name of Agency: Seminole County Dept. of Public Safety: EMS/Fire Division

Mailing Address: 150 Bush Blvd. _____

Sanford, Florida 32773

Federal Identification Number VF59740013K _____

Authorized Agency Official: _____

Signature

Date

Daryl G. McLain, Chairman
Seminole County Board of County Commissioners
Type Name and Title

Sign and return this page with your application to:

*Florida Department of Health
BEMS Grant Program
4052 Bald Cypress Way, Bin C18
Tallahassee, Florida 32399-1738*

Do not write below this line. For use by Bureau of Emergency Medical Services personnel only

Grant Amount For State To Pay: \$ _____

Grant ID Code: _____

Approved By: _____
Signature of EMS Grant Officer

Date

State Fiscal Year: _____ - _____

| | | | |
|--------------------------|-------------|------------|--------------------|
| <u>Organization Code</u> | <u>E.O.</u> | <u>OCA</u> | <u>Object Code</u> |
| 64-25-60-00-000 | N_ | N2000 | 7 _____ |

Federal Tax ID: VF_

Grant Beginning Date: Grant Ending Date: _____